Hydraulic Crawler Crane

CKE

900G

Model : CKE900G

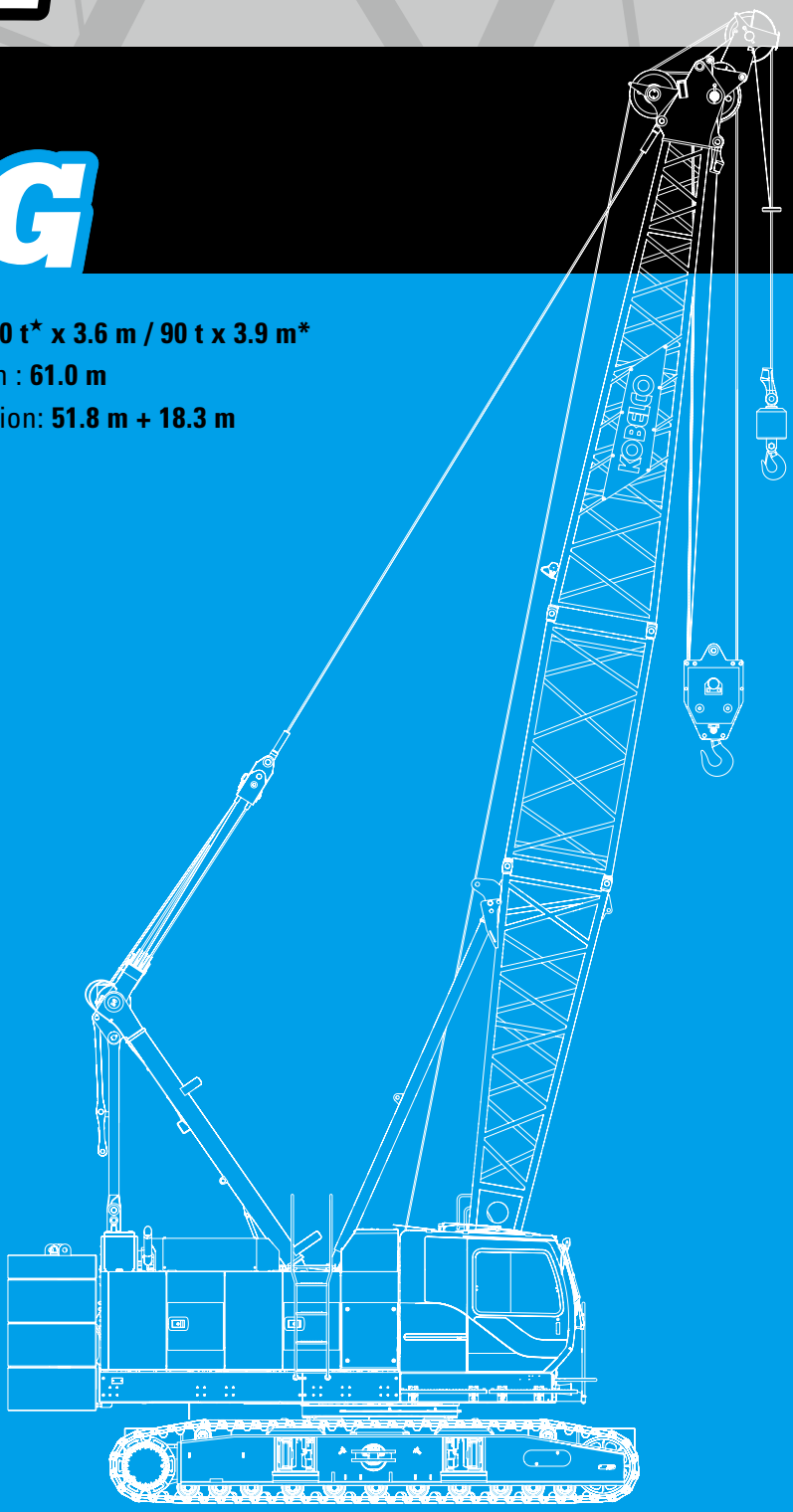
Max. Lifting Capacity: **100 t* x 3.6 m / 90 t x 3.9 m***

Max. Crane Boom Length : **61.0 m**

Max. Fixed Jib Combination: **51.8 m + 18.3 m**

* The value are theorical result.

* Auxiliary sheave is necessary.



KOBELCO

CKE900G
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SPECIFICATIONS

Power Plant

Model: HINO J08E-UV
Type: 4 cycle, water-cooled, vertical in-line 6, direct injection, turbo-charger, intercooler
Complies with NRMM (Europe) Stage IIIB and US EPA Interim Tier 4
Displacement: 7,684 liters
Rated power: 213 kW/2100 min^{-1}
Max. Torque: 1,017 N·m/1,600 min^{-1}
Cooling System: Water-cooled
Starter: 24V-5kW
Radiator: Corrugated type core, thermostatically controlled
Air cleaner: Dry type with replaceable paper element
Throttle: Twist grip type hand throttle, electrically actuated
Fuel filter: Replaceable paper element
Batteries: Two 12V x 136 Ah/5HR capacity batteries, series connected
Fuel tank capacity: 400 liters

Hydraulic System

Main pumps: 3 variable displacement piston pumps
Control: Full-flow hydraulic control system for infinitely variable pressure to all winches, propel and swing. Controls respond instantly to the touch, delivering smooth function operation.
Cooling: Oil-to-air heat exchanger (plate-fin type)
Filtration: Full-flow and bypass type with replaceable element
Max. relief valve pressure:
Load hoist, boom hoist and propel system: 31.9 MPa
Swing system: 27.5 MPa
Control system: 5.4 MPa
Hydraulic Tank Capacity: 440 liters

Boom Hoisting System

Powered by a hydraulic motor through a planetary reducer.
Brake: A spring-set, hydraulically released multiple-disc brake is mounted on the boom hoist motor and operated through a counter-balance valve.
Drum Lock: External ratchet for locking drum
Drum: Single drum, grooved for 16mm dia. wire rope
Line Speed: Single line on first drum layer
Hoisting/Lowering: 70 to 2 m/min
Boom hoisting/lowering: 16 mm x 150 m
Boom guy line: 30 mm
Boom backstops: Required for all boom length

Load Hoisting System

Front and rear drums for load hoist powered by a hydraulic variable plunger motors, driven through planetary reducers.
Negative Brake: A spring-set, hydraulically released multiple-disc brake is mounted on the hoist motor and operated through a counter-balance valve. (Positive free fall brake is optional)
Drum Lock: External ratchet for locking drum
Drums:
Front Drums:
614 mm P.C.D x 617 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 240 m working length and 360 m storage length.
Rear Drum: 614 mm P.C.D x 617 mm grooved for 26 mm wire rope. Rope capacity is 165 m working length and 360 m storage length.
Diameter of wire rope
Main winch: 26 mm x 240 m
Aux. winch: 26 mm x 165 m
Third winch: 22 mm x 145 m
Line Speed*:
Hoisting/lowering: 120 to 3 m/min
Line Pull:
Max. Line Pull*: 208 kN {21.2 ft}
(Referential performance)
Rated Line Pull: 112 kN {11.4 ft}
*Single line on first drum layer

Swing System

Swing unit is powered by hydraulic motor driving spur gears through planetary reducers (2 set), the swing system provides 360° rotation.
Swing parking brakes: A spring-set, hydraulically released multiple-disc brake is mounted on swing motor.
Swing circle: Single-row ball bearing with an integral internally cut swing gear.
Swing lock: Manually, four position lock for transportation
Swing Speed: 4.0 min^{-1}

Upper Structure

Torsion-free precision machined upper frame. All components are located clearly and service friendly. Engine will with low noise level.
Counter weight: 31.9 ton

Cab & Control

Totally enclosed, full vision cab with safety glass, fully adjustable, high backed seat with a headrest and armrests, and intermittent wiper and window washer (skylight and front window).
Cab fittings:
Air conditioner, convenient compartment (for tool), cup holder, cigarette lighter, sun visor, roof blind, tinted glass, floor mat, footrest, and shoe tray

Lower Structure

Steel-welded carbody with axles. Crawler assemblies can be hydraulically extended for wide-track operation or retracted for transportation. Crawler belt tension is maintained by hydraulic jack force on the track-adjusting bearing block.
Carbodyweight: 14.4 ton
Crawler drive: Independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor propelling a driving tumbler through a planetary gear box. Hydraulic motor and gear box are built into the crawler side frame within the shoe width.
Crawler brakes: Spring-set, hydraulically released parking brakes are built into each propel drive.
Steering mechanism: A hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite directions).
Track rollers: Sealed track rollers for maintenance-free operation.
Shoe (flat): 800 mm wide each crawler
Max. gradeability: 40%

Weight

Including upper and lower machine, 31.9 ton counterweight and 14.4 ton carbody weight, basic boom (or basic boom + basic jib), hook, and other accessories.
Weight: 90.1 ton
Ground pressure: 101 kPa

Attachment

Boom & Jib:
Welded lattice construction using tubular, high-tensile steel chords with pin connection between sections.

Boom and Jib length

	Min. Length (Min. combination)	Max. Length (Max. combination)
Crane Boom	12.2 m	61.0 m
Fixed lib	24.4 m + 9.1 m	51.8 m + 18.3 m

Main Specifications (Model: CKE900G)

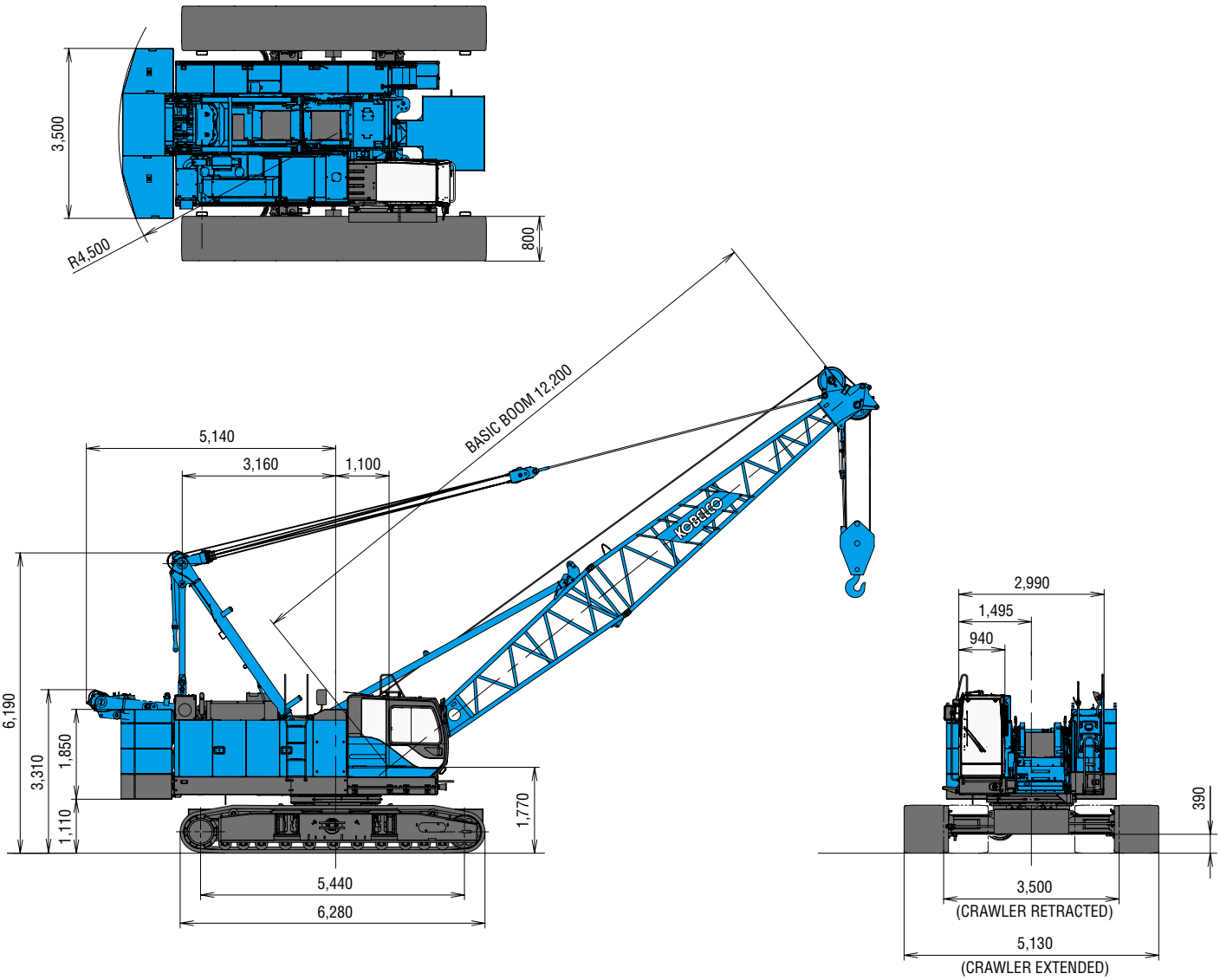
Crane Boom	
Max. Lifting Capacity	100 t * x 3.6 m / 90 t x 3.9 m *3
Max. Length	61.0 m
Fixed Jib	
Max. Lifting Capacity	10.9 t x 18.0 m
Max . Combination	51.8 m + 18.3 m
Main & Aux. Winch	
Max. Line Speed (1st layer)	120 m/min
Rated Line Pull (Single line)	112 kN {11.4 tf}
Wire Rope Diameter	26 mm
Wire Rope Length	240 m (Main), 165 m (Aux)
Brake Type (Free fall)	Wet-type multiple disc brake (Optional)
Working Speed	
Swing Speed	4.0 min^{-1} {rpm}
Travel Speed	1.7/1.1 km/h
Power Plant	
Model	HINO J08E-UV
Engine Output	213 kW/2100min^{-1}
Fuel Tank	400 liters

Hydraulic System	
Main Pums	3 variable displacement
Max. Pressure	31.9 Mpa {325 kg/cm^2}
Hydraulic Tank Capacity	440 liters
Self-Removal Device	
	Counterweight/self-removal device
Weight	
Operating Weight	90.1 t *1
Ground Pressure	101 kPa
Counterweight	31,900 kg
Transport Weight	41,360 kg *2

Units are SI units. { } indicates conventional units.
Line speeds in table are for light loads. Line speed varies with load.
*1 Including upper and lower machine, 31.9 ton counterweight, 14.4 ton carbody weight, basic boom, hook, and other accessories.
*2 Base machine with boom base, gantry, crawlers, and wire ropes (front/boom hoist)
*3 Auxiliary sheave is must.
* The value are theorical result.

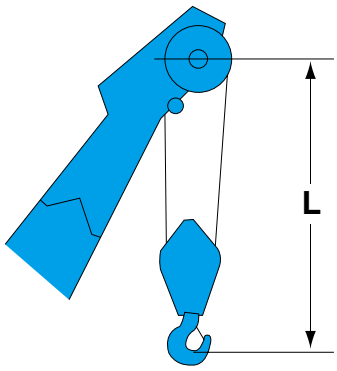
GENERAL DIMENSIONS

(Unit: mm)

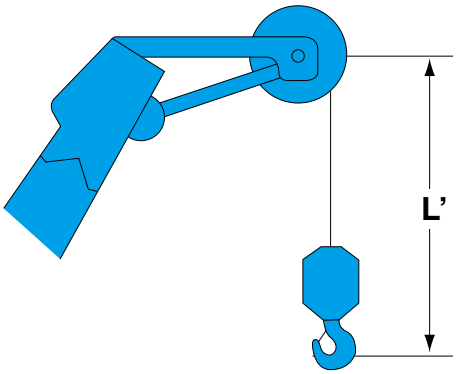


This catalog may contain photographs of machines with specifications, attachments and optional equipment.

Limit of Hook Lifting



Hook	L
90 t hook	4.1 m
70 t hook	4.1 m
50 t hook	4.0 m
35 t hook	3.9 m



Hook	L'
Ball hook	3.5 m

Crane Boom Arrangements

Boom length m (ft)	Boom arrangement
12.2 (40)	B T
15.2 (50)	※ B 10 T
18.3 (60)	※ B 10 10 T B 20 T
21.3 (70)	※ B 10 20 T
24.4 (80)	※ B 10 10 20 T B 40A T B 20 20 T
27.4 (90)	※ B 10 20 20 T B 10 40A T
30.5 (100)	※ B 10 10 20 20 T B 10 10 40A T B 20 40A T
33.5 (110)	※ B 10 20 40A T
36.6 (120)	※ B 10 10 20 40A T B 40 40A T B 20 20 40A T
39.6 (130)	※ B 10 20 20 40A T B 10 40 40A T

Boom length m (ft)	Boom arrangement
42.7 (140)	※ B 10 10 20 20 40A T B 10 10 40 40A T B 20 40 40A T
45.7 (150)	※ B 10 20 40 40A T
48.8 (160)	※ B 10 10 20 40 40A T B 20 20 40 40A T B 40 40 40A T
51.8 (170)	※ B 10 20 20 40 40A T B 10 40 40 40A T
54.9 (180)	※ B 10 10 20 20 40 40A T B 10 10 40 40 40A T B 20 40 40 40A T
57.9 (190)	※ B 10 20 40 40 40A T
61.0 (200)	※ B 10 10 20 40 40 40A T

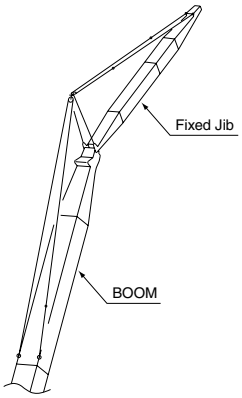
Symbol	Boom Length	Remarks
B	5.8 m	Boom Base
T	6.4 m	Boom Top
10	3.0 m	Insert Boom
20	6.1 m	Insert Boom
40	12.2 m	Insert Boom
40A	12.2 m	Insert Boom with lug

↗ mark shows the boom insert with lug attached and the guy line installing position when the fixed jib is used.

※ mark shows the standard boom arrangement which make the boom arrangement of less than the each boom length possible.

○ mark shows the installing of the cable roller for the insert boom.

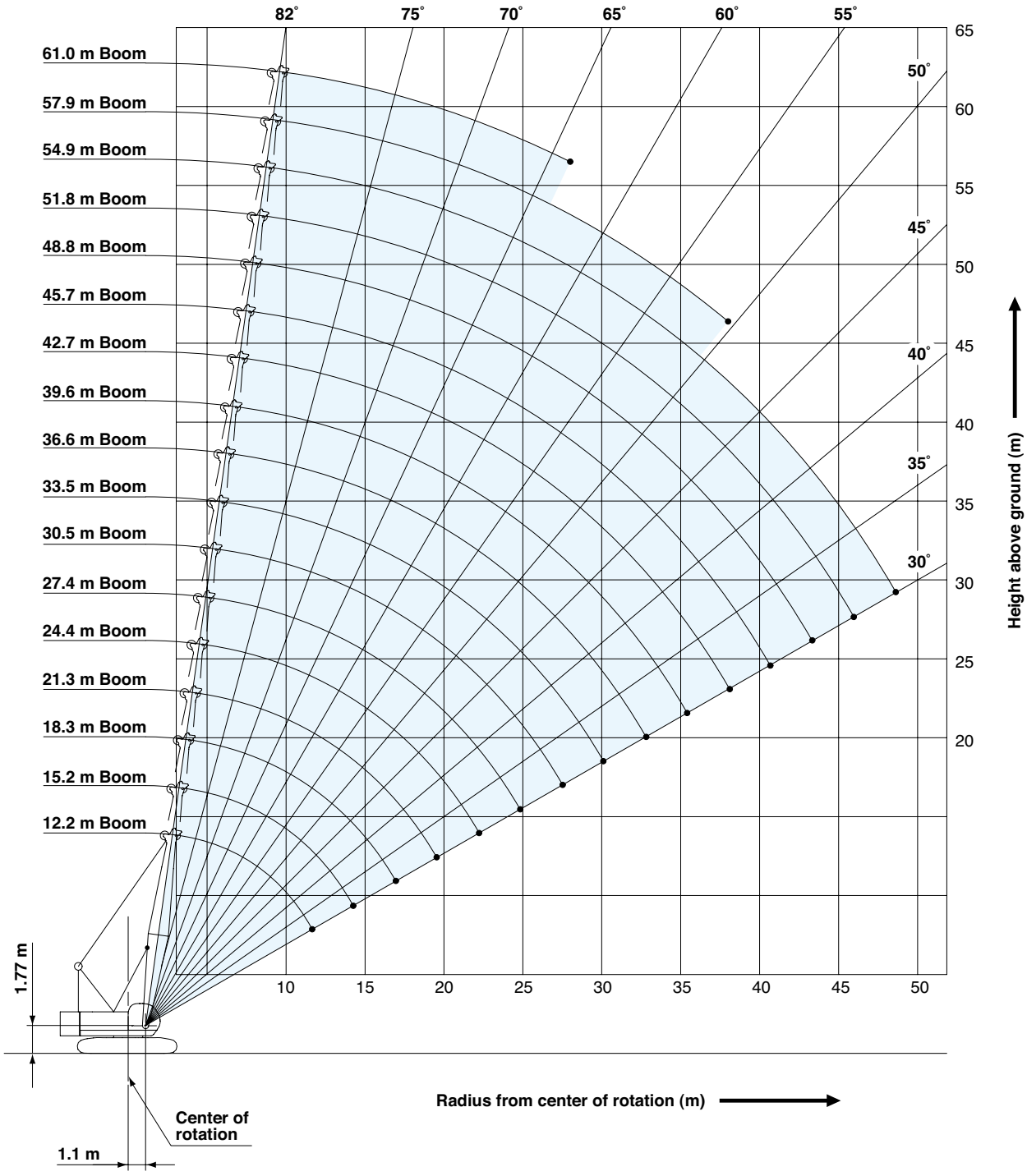
Fixed Jib Arrangements



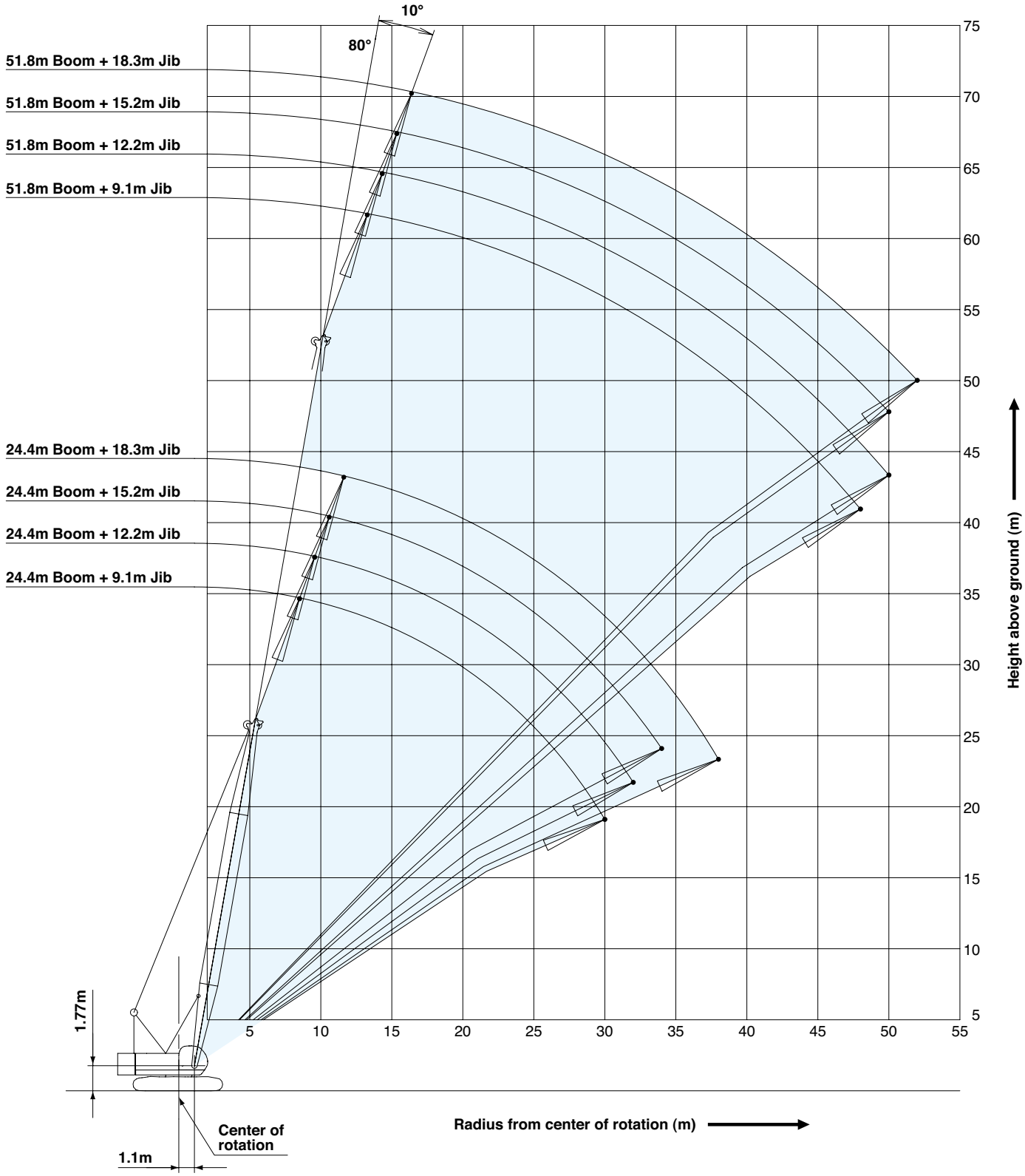
Crane boom length	Jib length m (ft)	Jib arrangement
24.4 m ～ 51.8 m	9.1 (30)	B T (4.6, 4.6)
	12.2 (40)	B 10 T
	15.2 (50)	B 20 T
	18.3 (60)	B 20 10 T

Symbol	Jib Length	Remarks
B	4.6 m	Jib Base
T	4.6 m	Jib Top
10	3.0 m	Insert Jib
20	6.1 m	Insert Jib

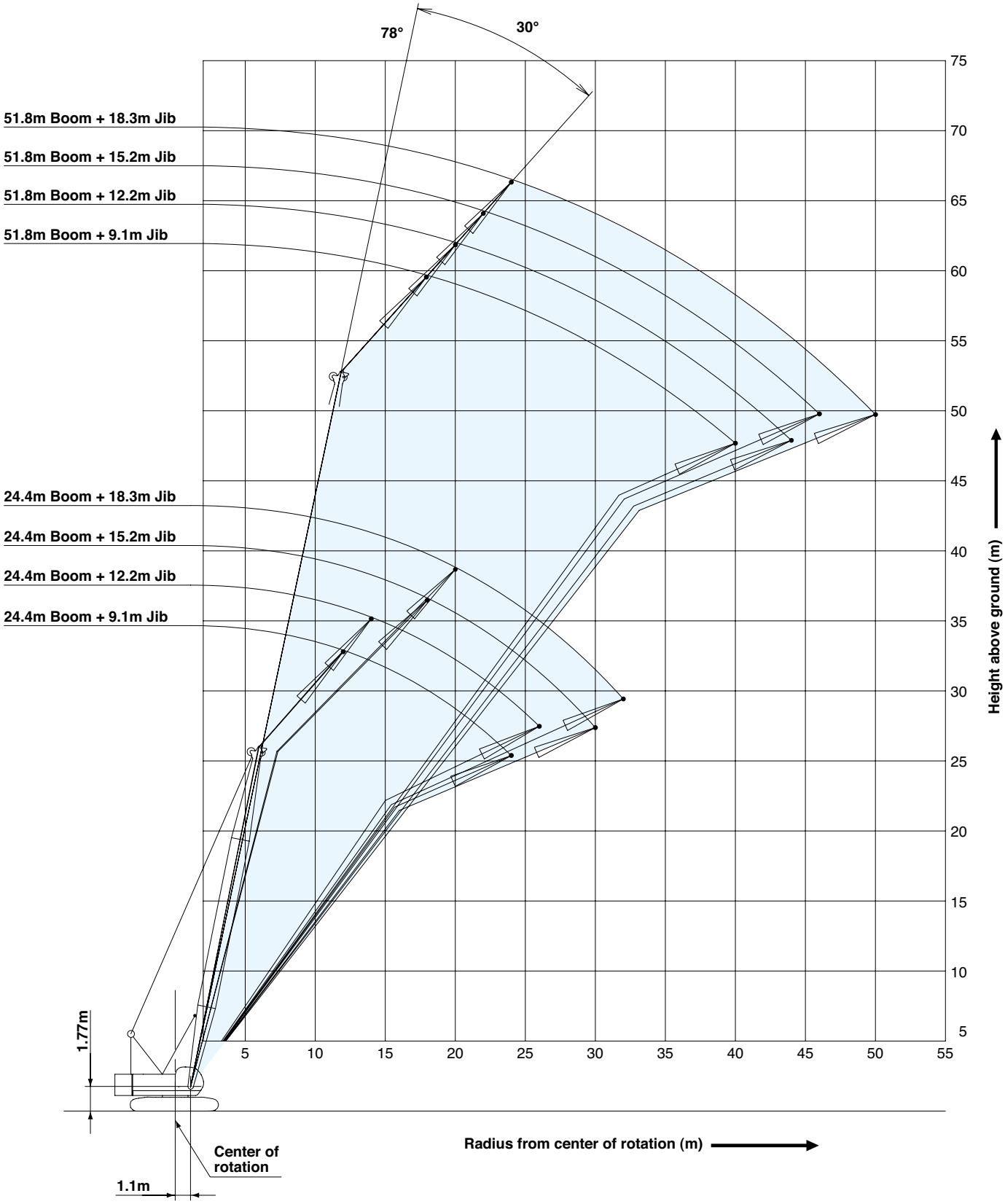
Crane Boom


82°
75°
70°
65°
60°
55°
50°
45°
40°
35°
30°
61.0 m Boom
57.9 m Boom
54.9 m Boom
51.8 m Boom
48.8 m Boom
45.7 m Boom
42.7 m Boom
39.6 m Boom
36.6 m Boom
33.5 m Boom
30.5 m Boom
27.4 m Boom
24.4 m Boom
21.3 m Boom
18.3 m Boom
15.2 m Boom
12.2 m Boom
65
60
55
50
45
40
35
30
25
20
10
15
20
25
30
35
40
45
50
Height above ground (m)
Radius from center of rotation (m)
1.77 m
1.1 m
Center of rotation

Fixed Jib 10°


10°
80°
51.8m Boom + 18.3m Jib
51.8m Boom + 15.2m Jib
51.8m Boom + 12.2m Jib
51.8m Boom + 9.1m Jib
24.4m Boom + 18.3m Jib
24.4m Boom + 15.2m Jib
24.4m Boom + 12.2m Jib
24.4m Boom + 9.1m Jib
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
Height above ground (m)
5
10
15
20
25
30
35
40
45
50
55
Radius from center of rotation (m)
1.77m
1.1m
Center of rotation

Fixed Jib 30°


78°
30°
51.8m Boom + 18.3m Jib
51.8m Boom + 15.2m Jib
51.8m Boom + 12.2m Jib
51.8m Boom + 9.1m Jib
24.4m Boom + 18.3m Jib
24.4m Boom + 15.2m Jib
24.4m Boom + 12.2m Jib
24.4m Boom + 9.1m Jib
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
Height above ground (m)
5
10
15
20
25
30
35
40
45
50
55
Radius from center of rotation (m)
1.77m
Center of rotation
1.1m

- Ratings according to EN13000.
- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of hook block (s), slings and all other load handling accessories from main boom ratings shown.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment.
  The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
- Ratings are for operation on a firm and level surface, up to 1 % gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Ratings inside of boxes ☐ are limited by strength of materials.
- The minimum rated load is 1.4 (ton).
- Crawler frames must be fully extended for all crane operations.

(Crane boom lifting)

- The total load that can be lifted is the value for weight of main hook block, slings, and all other load handling accessories deducted from crane boom ratings shown.

(Fixed jib lifting)

- The total load that can be lifted is the value for weight of jib hook block, slings, and all other load handling accessories deducted from fixed jib ratings shown.
- The availability of fixed jib mounting
  - On crane boom : Range 24.4 m to 51.8 m.

<Reference Information>

Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	112	224	335	447	559
Maximum Loads (t)	11.4	22.8	34.2	45.6	57.0

No. of Parts of Line	6	7	8
Maximum Loads (kN)	671	779	883
Maximum Loads (t)	68.4	79.4	90.0

Auxiliary hoist loads

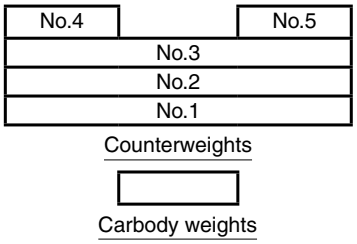
No. of Parts of Line	1
Maximum Loads (kN)	108
Maximum Loads (t)	11.0

Weight of hook block					
Hook Block	90 t	70 t	50 t	35 t	Ball Hook
Weight (t)	1.3	0.9	0.85	0.7	0.3

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

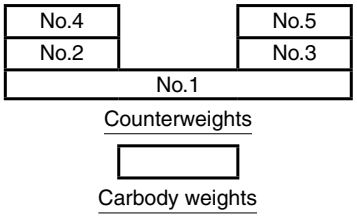
Assembling the counterweight

31.9 ton counterweight
14.4 ton carbody weight



Assembling the counterweight

(Equipped with self removal device)
31.3 ton counterweight
14.4 ton carbody weight



- The lifting capacity does not change due to the type of counterweights.

Crane Boom Lifting Capacities

Counterweight: 31.9 t
Carbody Weight: 14.4 t

Unit: metric ton

Working radius (m) \ Boom Length (m)	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	Boom Length (m) / Working radius (m)
3.6	100.0*										**3.6**
3.9	90.0	89.9	89.7								**3.9**
4.0	89.0	88.9	88.7	4.3m/68.4							**4.0**
4.5	79.6	79.5	79.4	68.4	4.7m/68.4						**4.5**
5.0	72.1	71.9	71.8	68.4	67.6	5.1m/57.0					**5.0**
5.5	65.8	65.7	65.5	63.6	60.6	57.0	5.6m/54.0				**5.5**
6.0	60.5	60.3	59.9	57.5	54.9	52.7	50.5	45.6	6.4m/41.9	6.8m/34.2	**6.0**
7.0	48.6	48.5	48.4	48.1	46.2	44.5	42.9	41.5	40.0	34.2	**7.0**
8.0	39.9	39.8	39.7	39.9	39.8	38.5	37.2	36.1	35.0	33.9	**8.0**
9.0	33.8	33.7	33.6	33.8	33.6	33.6	32.8	31.9	31.0	30.1	**9.0**
10.0	29.3	29.2	29.1	29.2	29.1	29.0	28.9	28.5	27.7	27.0	**10.0**
12.0	11.8m/22.9	22.9	22.8	22.9	22.8	22.7	22.6	22.6	22.5	22.3	**12.0**
14.0		18.8	18.6	18.8	18.6	18.5	18.4	18.4	18.3	18.3	**14.0**
16.0		14.4m/18.1	15.7	15.8	15.7	15.6	15.5	15.4	15.3	15.3	**16.0**
18.0			17.0m/14.5	13.7	13.5	13.4	13.3	13.2	13.1	13.1	**18.0**
20.0				19.6m/12.2	11.8	11.7	11.6	11.5	11.4	11.4	**20.0**
22.0					10.5	10.4	10.2	10.2	10.0	10.0	**22.0**
24.0					22.3m/10.3	9.3	9.1	9.1	8.9	8.9	**24.0**
26.0						24.9m/8.8	8.2	8.2	8.0	8.0	**26.0**
28.0							27.6m/7.6	7.4	7.2	7.2	**28.0**
30.0								6.8	6.6	6.5	**30.0**
32.0								30.2m/6.7	6.0	6.0	**32.0**
34.0									32.9m/5.8	5.5	**34.0**
36.0										35.5m/5.1	**36.0**
Reeves	8	8	8	6	6	5	5	4	4	4	**Reeves**

Working radius (m) \ Boom Length (m)	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom Length (m) / Working radius (m)
7.0	7.3m/31.9	7.7m/28.0						**7.0**
8.0	31.4	27.8	8.1m/22.1	8.5m/19.2				**8.0**
9.0	29.2	26.2	20.8	18.6	16.2	9.4m/13.9	9.8m/11.8	**9.0**
10.0	26.2	24.5	19.5	17.4	15.2	13.4	11.7	**10.0**
12.0	21.7	21.2	17.3	15.4	13.3	11.7	10.2	**12.0**
14.0	18.1	18.0	15.5	13.8	11.9	10.4	9.0	**14.0**
16.0	15.2	15.1	14.1	12.4	10.7	9.3	8.0	**16.0**
18.0	12.9	12.9	12.8	11.4	9.7	8.4	7.2	**18.0**
20.0	11.2	11.2	11.1	10.4	8.9	7.6	6.5	**20.0**
22.0	9.9	9.8	9.8	9.6	8.1	7.0	5.9	**22.0**
24.0	8.7	8.7	8.6	8.5	7.5	6.4	5.4	**24.0**
26.0	7.8	7.7	7.7	7.6	6.9	5.9	4.9	**26.0**
28.0	7.0	7.0	6.9	6.8	6.4	5.4	4.5	**28.0**
30.0	6.4	6.3	6.3	6.1	6.0	5.0	4.1	**30.0**
32.0	5.8	5.7	5.7	5.6	5.4	4.6	3.8	**32.0**
34.0	5.3	5.2	5.1	5.0	4.9	4.3	3.4	**34.0**
36.0	4.8	4.8	4.7	4.6	4.4	4.0	3.2	**36.0**
38.0	4.4	4.4	4.2	4.1	4.0	3.6	2.9	**38.0**
40.0	38.1m/4.4	4.0	3.9	3.8	3.6	3.3	2.6	**40.0**
44.0		40.8m/3.9	43.4m/3.3	3.1	3.0	2.8	2.1	**44.0**
48.0				46.1m/2.8	2.5	2.2	1.7	**48.0**
52.0					48.7m/2.4	51.4m/1.8		**52.0**
Reeves	4	4	2	2	2	2	2	**Reeves**

Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.
* The value are theorical result.

Fixed Jib Lifting Capacities (Without Main Hook Block) (Jib Offset Angle : 10°)

Counterweight: 31.9 t
Carbody Weight: 14.4 t

Unit: metric ton

Boom length (m)	24.4				27.4				30.5				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
9.0	10.9												9.0
10.0	10.9				10.9				10.9				10.0
12.0	10.9	10.9	9.0		10.9	10.9	9.0		10.9	10.9			12.0
14.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	14.0
16.0	10.9	10.5	8.7	7.7	10.9	10.9	9.0	7.9	10.9	10.9	9.0	8.1	16.0
18.0	10.9	9.5	7.8	6.8	10.9	10.2	8.3	7.2	10.9	10.6	8.7	7.5	18.0
20.0	10.3	8.6	7.1	6.2	10.2	9.2	7.5	6.5	10.1	9.7	7.9	6.8	20.0
22.0	9.0	7.8	6.5	5.6	8.9	8.4	6.9	5.9	8.8	8.9	7.2	6.2	22.0
24.0	8.0	7.2	5.9	5.1	7.9	7.7	6.3	5.4	7.8	8.0	6.6	5.7	24.0
26.0	7.2	6.7	5.5	4.7	7.1	7.1	5.8	5.0	7.0	7.1	6.2	5.3	26.0
28.0	6.5	6.2	5.1	4.4	6.4	6.5	5.4	4.6	6.3	6.4	5.7	4.9	28.0
30.0	5.9	5.8	4.8	4.1	5.8	5.9	5.1	4.3	5.7	5.8	5.4	4.6	30.0
32.0		5.5	4.5	3.8	5.3	5.4	4.8	4.1	5.2	5.3	5.1	4.3	32.0
34.0			4.2	3.6		4.9	4.5	3.8	4.7	4.8	4.8	4.0	34.0
36.0				3.4			4.3	3.6		4.4	4.5	3.8	36.0
38.0				3.2			4.1	3.4		4.0	4.1	3.6	38.0
40.0								3.2			3.8	3.4	40.0
42.0												3.3	42.0
44.0												3.1	44.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Boom length (m)	33.5				36.6				39.6				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
12.0	10.9	10.9			10.9				10.9				12.0
14.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0		10.9	10.9	9.0		14.0
16.0	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	16.0
18.0	10.9	10.9	9.0	7.8	10.9	10.9	9.0	8.1	10.9	10.9	9.0	8.1	18.0
20.0	10.0	10.1	8.3	7.1	9.9	10.0	8.6	7.4	9.8	9.9	9.0	7.7	20.0
22.0	8.7	8.8	7.6	6.5	8.6	8.7	8.0	6.8	8.5	8.6	8.2	7.0	22.0
24.0	7.8	7.8	7.0	6.0	7.5	7.7	7.3	6.2	7.4	7.6	7.7	6.5	24.0
26.0	7.0	7.0	6.5	5.5	6.7	6.9	6.8	5.8	6.6	6.8	6.9	6.0	26.0
28.0	6.2	6.3	6.0	5.1	6.1	6.2	6.2	5.4	6.0	6.1	6.1	5.6	28.0
30.0	5.6	5.7	5.6	4.8	5.5	5.5	5.7	5.0	5.4	5.4	5.6	5.2	30.0
32.0	5.1	5.2	5.2	4.5	5.0	5.0	5.1	4.7	4.8	4.9	5.0	4.9	32.0
34.0	4.7	4.7	4.8	4.2	4.5	4.6	4.7	4.4	4.4	4.5	4.5	4.6	34.0
36.0	4.2	4.3	4.4	4.0	4.1	4.2	4.2	4.2	4.0	4.1	4.1	4.2	36.0
38.0	3.9	4.0	4.0	3.8	3.8	3.8	3.9	3.9	3.7	3.7	3.8	3.8	38.0
40.0		3.7	3.7	3.6	3.4	3.5	3.6	3.6	3.3	3.4	3.4	3.5	40.0
42.0			3.4	3.4		3.2	3.3	3.3	3.0	3.1	3.2	3.2	42.0
44.0				3.2			3.0	3.1		2.7	2.9	2.9	44.0
46.0								2.8			2.6	2.7	46.0
48.0								2.4			2.2	2.4	48.0
50.0												2.1	50.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

Fixed Jib Lifting Capacities (Without Main Hook Block) (Jib Offset Angle : 10°)

Counterweight: 31.9 t
Carbody Weight: 14.4 t

Unit: metric ton

Boom length (m)	42.7				45.7				48.8				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
14.0	10.9	10.9			10.9	10.9			10.9				14.0
16.0	10.9	10.9	9.0		10.9	10.9	9.0		10.9	10.9			16.0
18.0	10.9	10.9	9.0	8.1	10.8	10.9	9.0	8.1	10.8	10.9	9.0	8.1	18.0
20.0	9.6	9.8	9.0	7.9	9.5	9.6	9.0	8.1	9.5	9.6	9.0	8.1	20.0
22.0	8.4	8.5	8.5	7.3	8.3	8.4	8.5	7.6	8.2	8.4	8.5	7.8	22.0
24.0	7.3	7.5	7.6	6.7	7.2	7.4	7.5	7.0	7.2	7.3	7.4	7.2	24.0
26.0	6.5	6.7	6.7	6.3	6.4	6.5	6.7	6.5	6.3	6.5	6.6	6.7	26.0
28.0	5.8	5.9	6.0	5.8	5.7	5.8	5.9	6.0	5.7	5.8	5.9	5.9	28.0
30.0	5.2	5.3	5.4	5.4	5.1	5.2	5.3	5.4	5.1	5.2	5.2	5.3	30.0
32.0	4.7	4.8	4.9	4.9	4.6	4.7	4.8	4.8	4.6	4.6	4.7	4.8	32.0
34.0	4.3	4.3	4.4	4.5	4.2	4.2	4.3	4.4	4.1	4.2	4.3	4.3	34.0
36.0	3.8	3.9	4.0	4.0	3.7	3.8	3.9	3.9	3.7	3.8	3.8	3.9	36.0
38.0	3.5	3.6	3.6	3.7	3.5	3.5	3.5	3.6	3.4	3.4	3.5	3.5	38.0
40.0	3.2	3.3	3.3	3.3	3.1	3.2	3.2	3.3	3.0	3.1	3.2	3.2	40.0
42.0	2.9	3.0	3.0	3.1	2.8	2.9	2.9	3.0	2.8	2.8	2.9	2.9	42.0
44.0	2.5	2.7	2.8	2.8	2.5	2.6	2.7	2.7	2.5	2.5	2.6	2.6	44.0
46.0	2.2	2.3	2.5	2.6	2.2	2.3	2.4	2.5	2.2	2.2	2.4	2.4	46.0
48.0		2.0	2.2	2.3	1.8	2.0	2.1	2.2	1.8	1.9	2.1	2.1	48.0
50.0			1.9	2.0		1.7	1.8	1.9	1.4	1.6	1.8	1.9	50.0
52.0				1.7			1.6	1.7			1.5	1.6	52.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Boom length (m)	51.8			
Jib length (m)	9.1	12.2	15.2	18.3
Working radius (m)				
14.0	10.9			
16.0	10.9	10.9		
18.0	10.7	10.8	9.0	8.1
20.0	9.4	9.5	9.0	8.1
22.0	8.1	8.3	8.3	8.0
24.0	7.1	7.2	7.3	7.4
26.0	6.2	6.4	6.5	6.6
28.0	5.6	5.7	5.8	5.8
30.0	5.0	5.1	5.1	5.2
32.0	4.4	4.5	4.6	4.7
34.0	4.0	4.1	4.2	4.2
36.0	3.6	3.6	3.7	3.8
38.0	3.3	3.3	3.4	3.4
40.0	2.9	3.0	3.0	3.1
42.0	2.7	2.7	2.8	2.8
44.0	2.3	2.4	2.5	2.5
46.0	2.1	2.1	2.2	2.3
48.0	1.7	1.8	1.9	2.0
50.0		1.5	1.6	1.7
52.0				1.5
Reeves	1	1	1	1

Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

Fixed Jib Lifting Capacities (Without Main Hook Block) (Jib Offset Angle : 30°)

Counterweight: 31.9 t
Carbody Weight: 14.4 t

Unit: metric ton

Boom length (m)	24.4				27.4				30.5				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
12.0	9.5												12.0
14.0	9.3	6.9			9.4				9.5				14.0
16.0	8.6	6.4			8.9	6.5			9.0	6.7			16.0
18.0	8.0	5.9	4.8		8.3	6.1	4.9		8.6	6.2	5.0		18.0
20.0	7.5	5.6	4.5	3.8	7.8	5.7	4.6	3.9	8.0	5.9	4.7	3.9	20.0
22.0	7.1	5.3	4.2	3.6	7.4	5.4	4.3	3.6	7.6	5.6	4.4	3.7	22.0
24.0	6.8	5.0	4.0	3.4	7.0	5.1	4.1	3.4	7.3	5.3	4.2	3.5	24.0
26.0		4.8	3.8	3.2		4.9	3.9	3.2	7.0	5.1	4.0	3.3	26.0
28.0			3.6	3.0		4.7	3.7	3.0	6.4	4.9	3.8	3.1	28.0
30.0			3.5	2.9			3.6	2.9		4.7	3.7	3.0	30.0
32.0				2.8			3.5	2.8			3.6	2.9	32.0
34.0								2.7				2.8	34.0
36.0												2.7	36.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Boom length (m)	33.5				36.6				39.6				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
14.0	9.5				9.5								14.0
16.0	9.3	6.8			9.4				9.5				16.0
18.0	8.8	6.4			9.0	6.5			9.2	6.6			18.0
20.0	8.3	6.1	4.8	4.0	8.5	6.2	4.9	4.1	8.8	6.3	4.9		20.0
22.0	7.9	5.7	4.5	3.8	8.1	5.9	4.6	3.9	8.3	6.0	4.7	3.9	22.0
24.0	7.5	5.5	4.3	3.6	7.7	5.6	4.4	3.7	7.7	5.7	4.5	3.7	24.0
26.0	7.1	5.2	4.1	3.4	7.0	5.4	4.2	3.5	6.9	5.5	4.3	3.5	26.0
28.0	6.4	5.0	3.9	3.2	6.2	5.1	4.0	3.3	6.1	5.2	4.1	3.3	28.0
30.0	5.7	4.8	3.8	3.1	5.6	4.9	3.8	3.2	5.5	5.1	3.9	3.2	30.0
32.0		4.7	3.7	3.0	5.1	4.8	3.7	3.1	5.0	4.9	3.8	3.1	32.0
34.0			3.5	2.9		4.6	3.6	3.0		4.6	3.7	3.0	34.0
36.0				2.8			3.5	2.9		4.1	3.6	2.9	36.0
38.0				2.7			3.4	2.8			3.5	2.8	38.0
40.0								2.7				2.7	40.0
42.0												2.6	42.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

Fixed Jib Lifting Capacities (Without Main Hook Block) (Jib Offset Angle : 30°)

Counterweight: 31.9 t
Carbody Weight: 14.4 t

Unit: metric ton

Boom length (m)	42.7				45.7				48.8				Boom length (m)
Jib length (m)	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	9.1	12.2	15.2	18.3	Jib length (m)
Working radius (m)													Working radius (m)
16.0	9.5				9.5								16.0
18.0	9.4	6.7			9.5				9.5				18.0
20.0	8.9	6.4	5.1		9.1	6.5	5.1		9.2	6.6	5.1		20.0
22.0	8.4	6.1	4.8	4.0	8.4	6.2	4.9	4.0	8.5	6.3	4.9	4.1	22.0
24.0	7.6	5.8	4.6	3.8	7.6	5.9	4.7	3.8	7.5	6.0	4.7	3.9	24.0
26.0	6.7	5.6	4.4	3.6	6.6	5.7	4.5	3.7	6.6	5.8	4.5	3.7	26.0
28.0	6.0	5.4	4.2	3.4	5.9	5.5	4.3	3.5	5.9	5.6	4.3	3.6	28.0
30.0	5.3	5.2	4.0	3.3	5.3	5.3	4.1	3.3	5.2	5.4	4.1	3.4	30.0
32.0	4.8	5.0	3.9	3.2	4.8	4.9	4.0	3.2	4.7	4.9	4.0	3.3	32.0
34.0	4.4	4.5	3.8	3.1	4.3	4.4	3.9	3.1	4.2	4.4	3.9	3.2	34.0
36.0	3.9	4.1	3.7	3.0	3.9	4.0	3.7	3.0	3.9	3.9	3.8	3.1	36.0
38.0		3.7	3.6	2.9	3.5	3.6	3.6	2.9	3.5	3.6	3.7	3.0	38.0
40.0			3.5	2.8			3.4	2.8		3.2	3.4	2.9	40.0
42.0				2.7			3.1	2.7		2.9	3.0	2.8	42.0
44.0				2.6				2.7			2.7	2.7	44.0
46.0												2.6	46.0
48.0												2.3	48.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Boom length (m)	51.8			
Jib length (m)	9.1	12.2	15.2	18.3
Working radius (m)				
18.0	9.5			
20.0	9.3	6.6		
22.0	8.5	6.4	5.0	
24.0	7.5	6.1	4.8	3.9
26.0	6.6	5.9	4.6	3.8
28.0	5.9	5.7	4.4	3.6
30.0	5.2	5.4	4.2	3.5
32.0	4.7	4.8	4.1	3.4
34.0	4.2	4.3	4.0	3.3
36.0	3.7	3.8	3.9	3.2
38.0	3.3	3.5	3.6	3.1
40.0	3.0	3.2	3.3	3.0
42.0		2.9	3.0	2.9
44.0		2.6	2.7	2.6
46.0			2.4	2.4
48.0				2.2
50.0				2.0
Reeves	1	1	1	1

Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

SUPPLEMENTAL DATA FOR CLAMSHELL RATING CHART

- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of bucket, slings and all other load handling accessories from main boom ratings shown.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
- Rated loads do not exceed 66% of minimum tipping loads.
- Ratings are for operation on a firm and level surface, up to 1% gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Crawler frames must be fully extended for all crane operations.

(Clamshell bucket lifting)

- The total load that can be lifted is the value for weight of bucket, slings, and all other load handling accessories deducted from main boom ratings shown.
- The weight of bucket and materials must not exceed rated load.
- Optimum bucket should be required according to material. Bucket capacity (m^3) x specified gravity of material (ton/m^3) + bucket weight (ton) = rated load.
- Bucket weight must also be decreased according to operating cycle and bucket lowering height.
- Rated loads are determined by stability and boom strength. During simultaneous operations of boom and swing, rapid acceleration or deceleration must be avoided.
- Do not attempt to cast the bucket while swinging or diagonal draw-cutting.

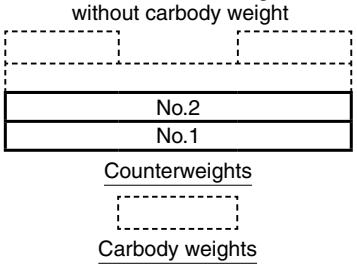
<Reference Information>

Main hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	98
Maximum Loads (t)	10.0

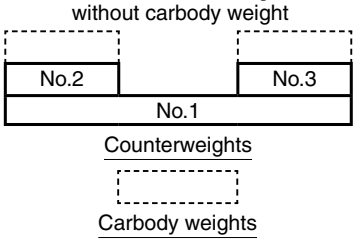
Assembling the counterweight

20.5 ton counterweight
without carbody weight



Assembling the counterweight

(Equipped with self removal device)
19.8 ton counterweight
without carbody weight



- The lifting capacity does not change due to the type of counterweights.

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

Clamshell Rating Charts
Crane Boom Capacities

Counterweight: 20.5 t
Without Carbody Weight
Crawler Fully Extended
Unit: metric ton

Load radius (m) \ Boom length (m)	12.2	15.2	18.3	21.3	24.4				Boom length (m) \ Load radius (m)
5.0	10.0								**5.0**
6.0	10.0	10.0							**6.0**
7.0	10.0	10.0	10.0						**7.0**
8.0	10.0	10.0	10.0	9.5					**8.0**
9.0	10.0	10.0	10.0	9.5	8.7				**9.0**
10.0	9.8	9.7	9.6	9.5	8.7				**10.0**
11.0	9.1	9.0	8.9	8.8	8.7				**11.0**
12.0		8.3	8.2	8.1	8.0				**12.0**
13.0		7.7	7.6	7.5	7.4				**13.0**
14.0		7.1	7.0	6.9	6.8				**14.0**
15.0			6.5	6.4	6.3				**15.0**
16.0			6.1	6.0	5.9				**16.0**
17.0				5.7	5.6				**17.0**
18.0				5.4	5.3				**18.0**
19.0				5.2	5.1				**19.0**
20.0					4.9				**20.0**
21.0					4.7				**21.0**
22.0									**22.0**
23.0									**23.0**
24.0									**24.0**
25.0									**25.0**
26.0									**26.0**
27.0									**27.0**
28.0									**28.0**
29.0									**29.0**
30.0									**30.0**
Reeves	1	1	1	1	1				**Reeves**

Note:
Please refer rated chart in operator's cabin.

SUPPLEMENTAL DATA FOR REDUCED WEIGHTS RATING CHART

- Ratings according to EN13000.
- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of hook block(s), slings and all other load handling accessories from main boom ratings shown.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
- Ratings are for operation on a firm and level surface, up to 1% gradient.
- At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
- Boom inserts and guy lines must be arranged as shown in the "operator's manual".
- Boom hoist reeving is 12 part line.
- Gantry must be in raised position for all conditions.
- Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not laterally.
- Ratings inside of boxes ☐ are limited by strength of materials.
- The minimum rated load is 1.4(Ton).
- Crawler frames must be fully extended for all crane operations.

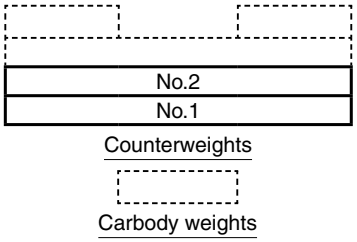
(Crane boom lifting)

- The total load that can be lifted is the value for weight of hook block, slings, and all other load handling accessories deducted from main boom ratings shown.

Counterweight	Carbody weight	Boom lenght	
		Without aux.	With aux.
20.5 ton	Without	12.2 m ～ 57.9 m	12.2 m ～ 54.9 m
19.8 ton	Without	12.2 m ～ 57.9 m	12.2 m ～ 54.9 m

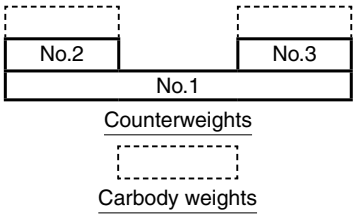
Assembling the counterweight

20.5 ton counterweight
without carbody weight
(Standard type)



Assembling the counterweight

(Equipped with self removal device)
19.8 ton counterweight
without carbody weight
(Optinal type)



- The lifting capacity does not change due to the type of counterweights. (Standard or optinal)

<Reference Information>

Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	112	224	335	447	559
Maximum Loads (t)	11.4	22.8	34.2	45.6	57.0

No. of Parts of Line	6	7	8
Maximum Loads (kN)	671	779	883
Maximum Loads (t)	68.4	79.4	90.0

Auxiliary hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	108
Maximum Loads (t)	11.0

Weight of hook block					
Hook Block	90 t	70 t	50 t	35 t	Ball Hook
Weight (t)	1.3	0.9	0.85	0.7	0.3

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

Reduced Weights Rating Charts
Crane Boom Lifting Capacities

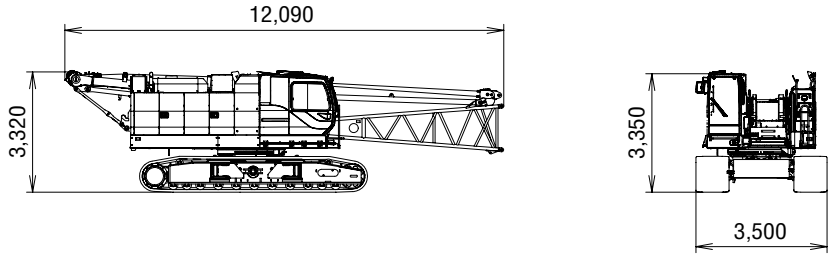
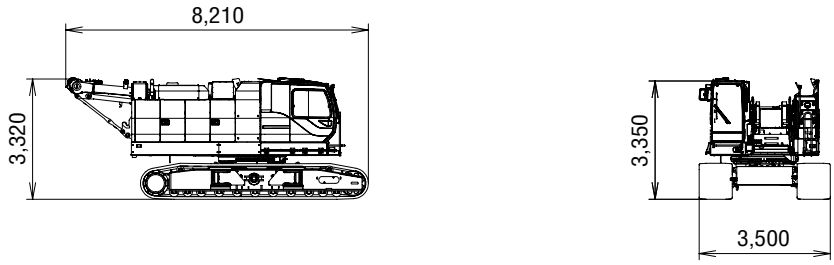
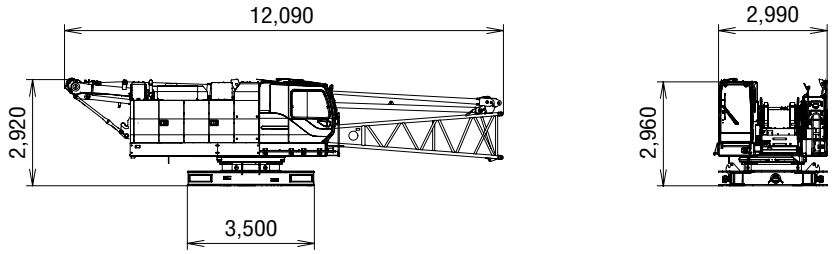
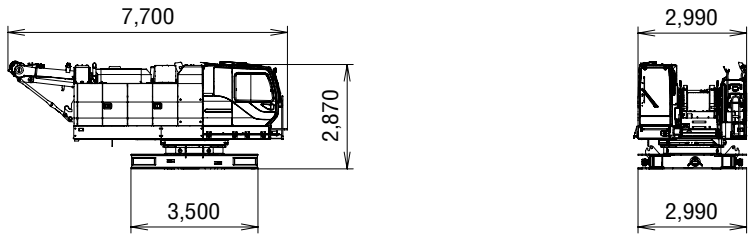
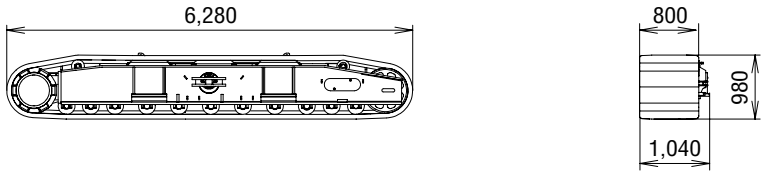
Counterweight: 20.5 t
Without Carbody Weight
Crawler Fully Extended
Unit: metric ton

Load radius (m) \ Boom length (m)	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6				Boom length (m) / Load radius (m)
3.9	81.2	77.3	71.4											3.9
4.0	80.2	74.6	69.0	4.3m/59.0										4.0
4.5	67.1	63.2	59.1	55.8	4.7m/49.9									4.5
5.0	54.8	54.8	51.6	49.0	46.4	5.1m/42.2								5.0
5.5	46.2	46.2	45.8	43.7	41.6	39.7	5.6m/37.1							5.5
6.0	40.0	39.9	39.7	39.4	37.6	36.0	34.5	33.1	6.4m/29.8	6.8m/26.9				6.0
7.0	31.3	31.2	31.1	30.9	30.6	30.3	29.2	28.2	27.1	26.2				7.0
8.0	25.7	25.6	25.4	25.4	25.4	25.3	25.2	24.4	23.6	22.8				8.0
9.0	21.7	21.6	21.4	21.4	21.4	21.4	21.3	21.3	20.8	20.1				9.0
10.0	18.8	18.6	18.5	18.5	18.5	18.5	18.4	18.3	18.2	18.0				10.0
12.0	11.8m/15.0	14.5	14.4	14.4	14.4	14.3	14.2	14.2	14.0	13.9				12.0
14.0		11.9	11.7	11.7	11.7	11.6	11.5	11.4	11.3	11.2				14.0
16.0		14.4m/11.5	9.8	9.8	9.8	9.7	9.6	9.5	9.4	9.3				16.0
18.0			17.0m/9.0	8.4	8.3	8.3	8.1	8.1	7.9	7.8				18.0
20.0				19.6m/7.6	7.2	7.1	7.0	6.9	6.8	6.7				20.0
22.0					6.4	6.3	6.1	6.1	5.9	5.8				22.0
24.0					22.3m/6.3	5.6	5.4	5.3	5.2	5.1				24.0
26.0						24.9m/5.3	4.8	4.8	4.6	4.5				26.0
28.0							27.6m/4.4	4.3	4.1	4.0				28.0
30.0								3.8	3.7	3.6				30.0
32.0								30.2m/3.8	3.3	3.2				32.0
34.0									32.9m/3.2	2.9				34.0
36.0										35.5m/2.7				36.0
38.0														38.0
40.0														40.0
44.0														44.0
Reeves	8	8	8	6	5	4	4	4	4	4				Reeves

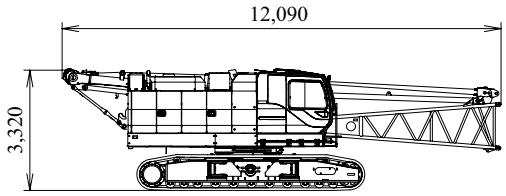
Load radius (m) \ Boom length (m)	42.7	45.7	48.8	51.8	54.9	57.9								Boom length (m) / Load radius (m)
4.5	7.3m/24.1	7.7m/22.2												4.5
5.0	22.0	21.4	8.1m/19.8	8.5m/17.2										5.0
5.5	19.5	18.9	18.3	16.6	14.5	9.4m/12.5								5.5
6.0	17.4	16.9	16.4	15.5	13.5	11.9								6.0
7.0	13.8	13.7	13.5	13.1	11.9	10.4								7.0
8.0	11.1	11.1	11.1	11.0	10.6	9.3								8.0
9.0	9.1	9.1	9.1	9.0	8.9	8.3								9.0
10.0	7.7	7.7	7.7	7.6	7.5	7.4								10.0
12.0	6.6	6.6	6.5	6.4	6.3	6.3								12.0
14.0	5.7	5.7	5.6	5.5	5.4	5.4								14.0
16.0	4.9	4.9	4.9	4.8	4.7	4.6								16.0
18.0	4.3	4.3	4.3	4.2	4.1	4.0								18.0
20.0	3.8	3.8	3.8	3.7	3.6	3.5								20.0
22.0	3.4	3.4	3.4	3.3	3.1	3.0								22.0
24.0	3.1	3.1	3.0	2.9	2.7	2.6								24.0
26.0	2.7	2.7	2.6	2.5	2.3	2.3								26.0
28.0	2.4	2.4	2.3	2.2	2.0	1.9								28.0
30.0	2.1	2.1	2.0	1.9	1.7	1.7								30.0
32.0	38.1m/2.1	1.9	1.8	1.6	1.5	1.4								32.0
34.0		40.8m/1.8	43.4m/1.4											34.0
36.0														36.0
38.0														38.0
40.0														40.0
44.0														44.0
48.0														48.0
52.0														52.0
Reeves	4	2	2	2	2	2								Reeves

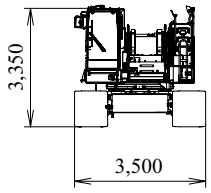
Note:
Ratings according to EN13000.
Ratings shown in [ ] are determined by the strength of the boom or other structural components.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

TRANSPORTATION PLAN

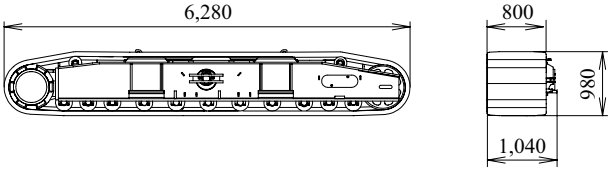
Name	Dimension	Weight (kg)
Base Machine • Boom base • Gantry • Crawler • Wire rope (Front / boom hoist)		41,360
Base Machine • Gantry • Crawler • Wire rope (Front / rear / boom hoist)		39,300
Base Machine • Boom base • Gantry • Wire rope (Front / rear / boom hoist) • Without crawler		27,000
Base Machine • Gantry • Wire rope (Front / rear / boom hoist) • Without crawler		24,940
Crawler		7,180

Base Machine
Boom base, Gantry, Crawler, Wire rope (Front/boom hoist)
Weight: 41,360 kg Width: 3,500 mm

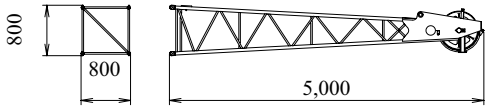




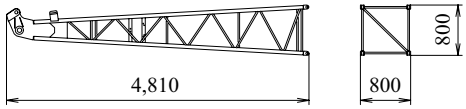
Crawler
Weight: 7,180 kg



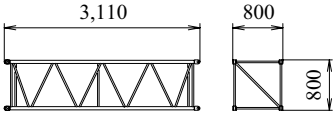
Upper Jib
Weight: 180 kg



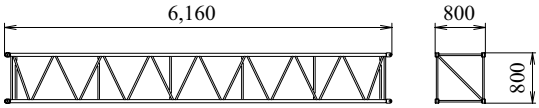
Lower Jib
Weight: 200 kg



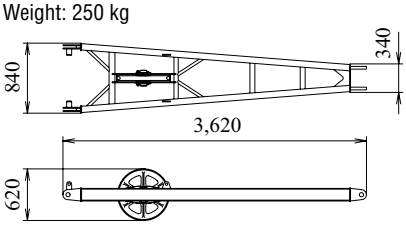
3.0 m
Jib Insert
Weight: 100 kg



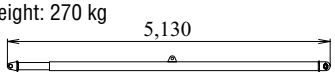
6.1 m
Jib Insert
Weight: 180 kg



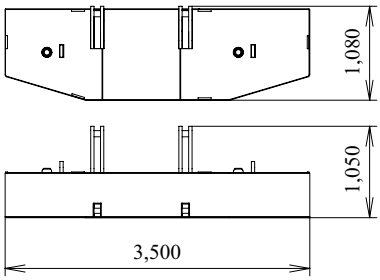
Strut
Weight: 250 kg



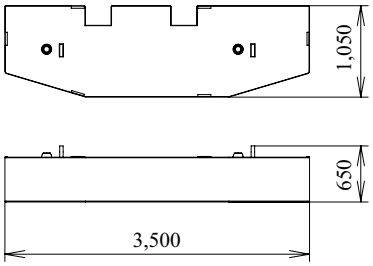
Crane
Backstop
Weight: 270 kg



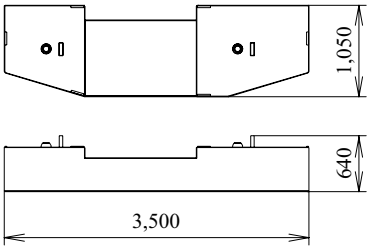
Counterweight No.1
Weight: 10,540 kg



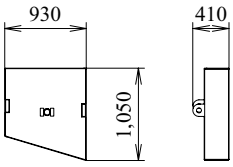
Counterweight No.2
Weight: 9,930 kg



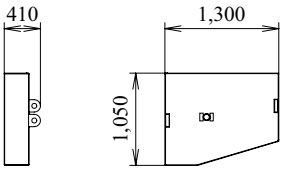
Counterweight No.3
Weight: 8,250 kg



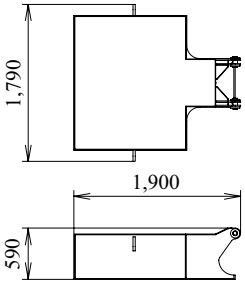
Counterweight No.4 (L)
Weight: 1,280 kg



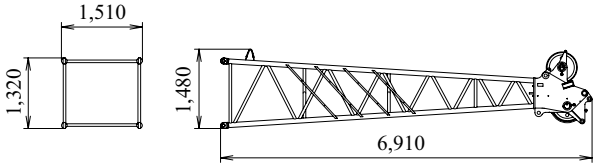
Counterweight No.4 (R)
Weight: 1,900 kg



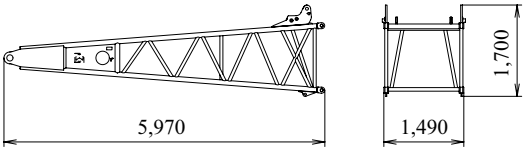
Carbody Weight
Weight: 7,200 kg



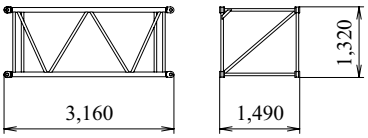
Boom Tip
Weight: 1,220 kg



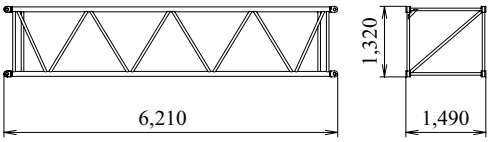
Boom Base
Weight: 1,120 kg



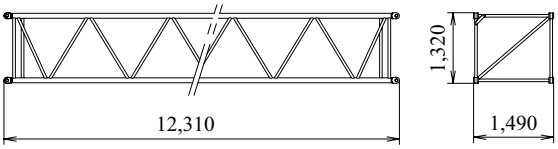
3.0 m
Boom Insert
Weight: 300 kg



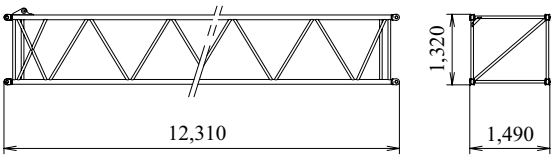
6.1 m
Boom Insert
Weight: 510 kg



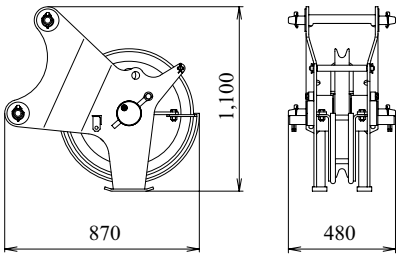
12.2 m
Insert Boom
Weight: 950 kg



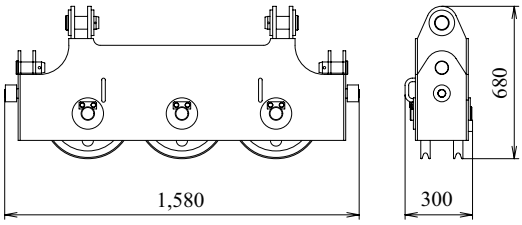
12.2 m
Boom Insert (with lug)
Weight: 1,220 kg



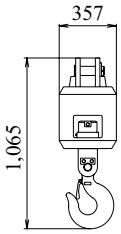
Auxiliary Sheave
Weight: 195 kg



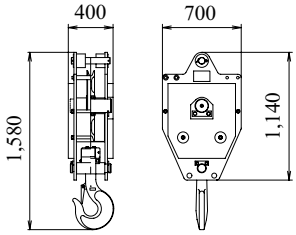
Upper Spreader
Weight: 280 kg



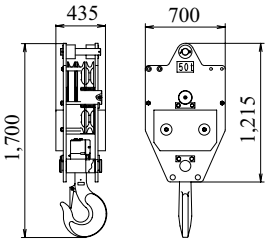
Ball Hook
Weight: 300 kg



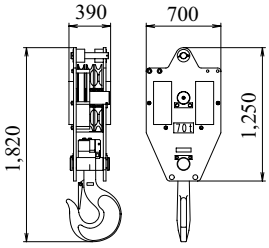
35 t Hook
Weight: 700 kg



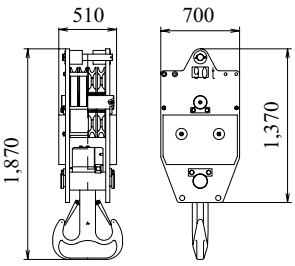
50 t Hook
Weight: 850 kg



70 t Hook
Weight: 900 kg



90 t Hook
Weight: 1,300 kg



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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