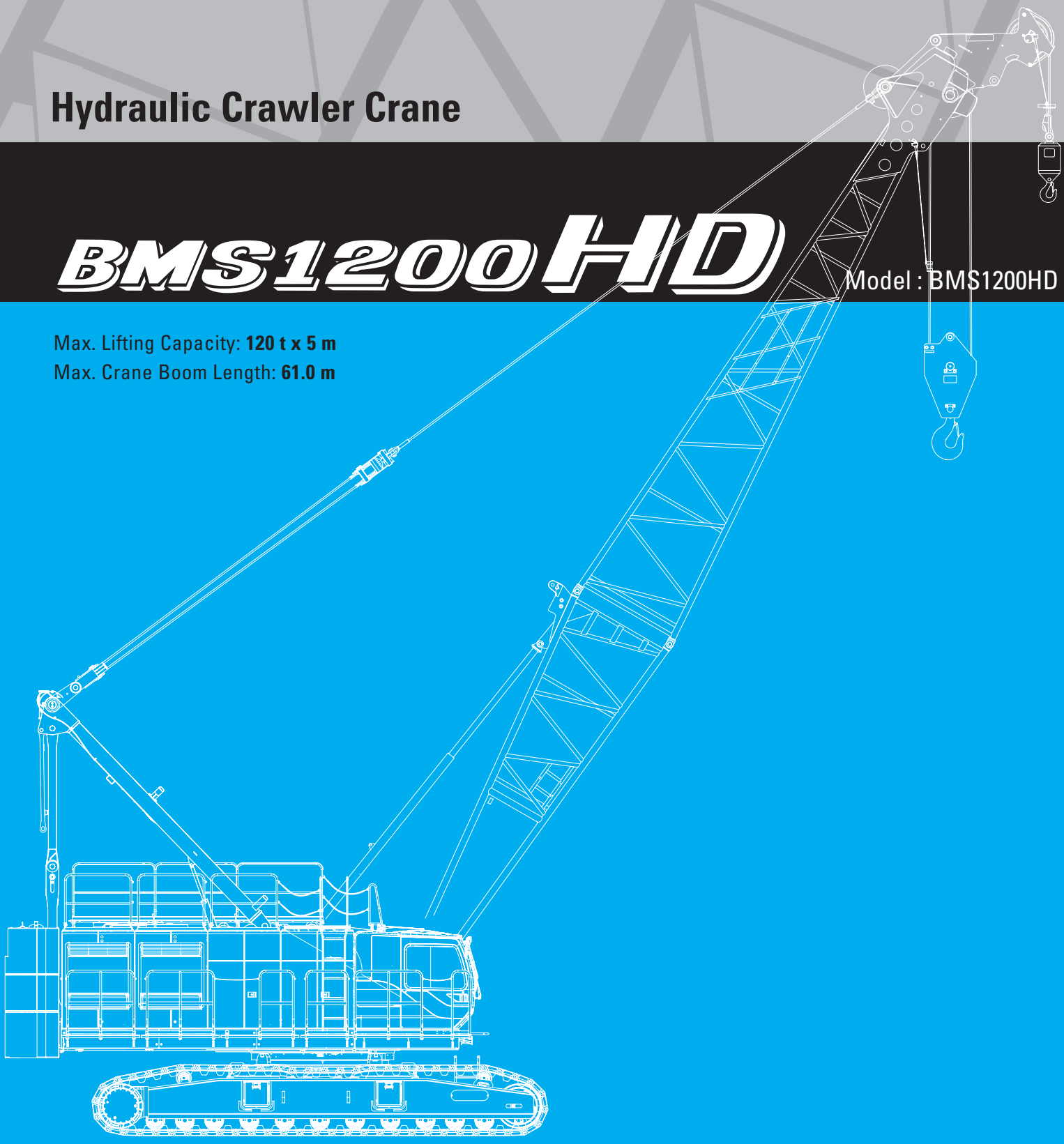
Hydraulic Crawler Crane

BMS1200HD

Model : BMS1200HD

Max. Lifting Capacity: **120 t x 5 m**
Max. Crane Boom Length: **61.0 m**



KOBELCO

BMS1200HD
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SPECIFICATIONS

Power Plant

Model: MTU 12V2000
Type: 4 cycle, water-cooled, 12 cylinders in 90° V design, direct injection, turbo-charger, intercooler.
Displacement: 23.880 liters
Rated power: 634 kW / 1,800 min^{-1}
Max. Torque: 3,750 N·m / 1,500 min^{-1}
Cooling System: Water-cooled
Starter: 24 V- 9 kw
Radiator: Corrugated type core, thermostatically controlled
Air cleaner: Dry type with replaceable paper element
Throttle: Twist grip type hand throttle, electrically actuated
Fuel filter: Heavy duty with spin off type cartridge.
Batteries: Two 12 V x 160 Ah capacity batteries, series connected
Fuel tank capacity: 900 liters

Hydraulic System

Main pumps: 4 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:** 32 Mpa
- **Swing system:** 28 MPa
- **Control system:** 5.4 MPa

Hydraulic Tank Capacity: 1,000 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 20 mm dia. wire rope
Line Speed: Single line on first drum layer
- **Hoisting/Lowering:** 48 to 2 m/min
- **Boom hoisting/lowering:** 20 mm x 190 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 two hydraulic variable plunger motors, driven through planetary reducers.
Positive & Negative Brake: Forced-circulation oil-cooled wet-type multi-disc brake, each using positive and negative actuation.
The drums are manually locked by the control cable. Both positive and negative brake systems are available in lever neutral position.
Drum Lock: External ratchet for locking drum
Drums:
- **Front Drums:** 864 mm P.C.D x 799 mm Lg., grooved for 36 mm wire rope. Rope capacity is 245 m working length and 460 m storage length.
- **Rear Drum:** 864 mm P.C.D x 799 mm grooved for 36 mm wire rope. Rope capacity is 175 m working length and 460 m storage length.

Diameter of wire rope
- **Main winch:** 36 mm x 245 m
- **Aux. winch:** 36 mm x 175 m
- **Third winch:** 30 mm x 210 m

Line Speed*:
- **Hoisting/lowering:** 110 to 3 m/min

Line Pull:
- **Max. Line Pull* :** 314 kN {32.0 tf} (Referential Performance)
- **Rated Line Pull:** 157 kN {16.0 tf}

*Single line on first drum layer

Swing System

Swing unit is powered by hydraulic motor driving spur gears through planetary reducers, 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: 2.1 min^{-1}

Upper Structure

Torsion-free precision machined upper frame. All components are located clearly and service friendly. Engine will with low noise level.
Counterweight: 32.5 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 are designed with quick disconnect feature for individual removal as a unit from axles. Crawler belt tension is maintained by hydraulic jack force on the track-adjusting bearing block.
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): 1,070 mm wide each crawler
Max. gradeability: 30 %

Weight

Including upper and lower machine, 32.5 ton counterweight, basic boom, hook, and other accessories.
Weight: 116 ton
Ground pressure: 79 kPa

Attachment

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

Boom length

	Min. Length	Max. Length
Crane Boom	18.3 m	61.0 m

Main Specifications (Model: BMS1200HD)

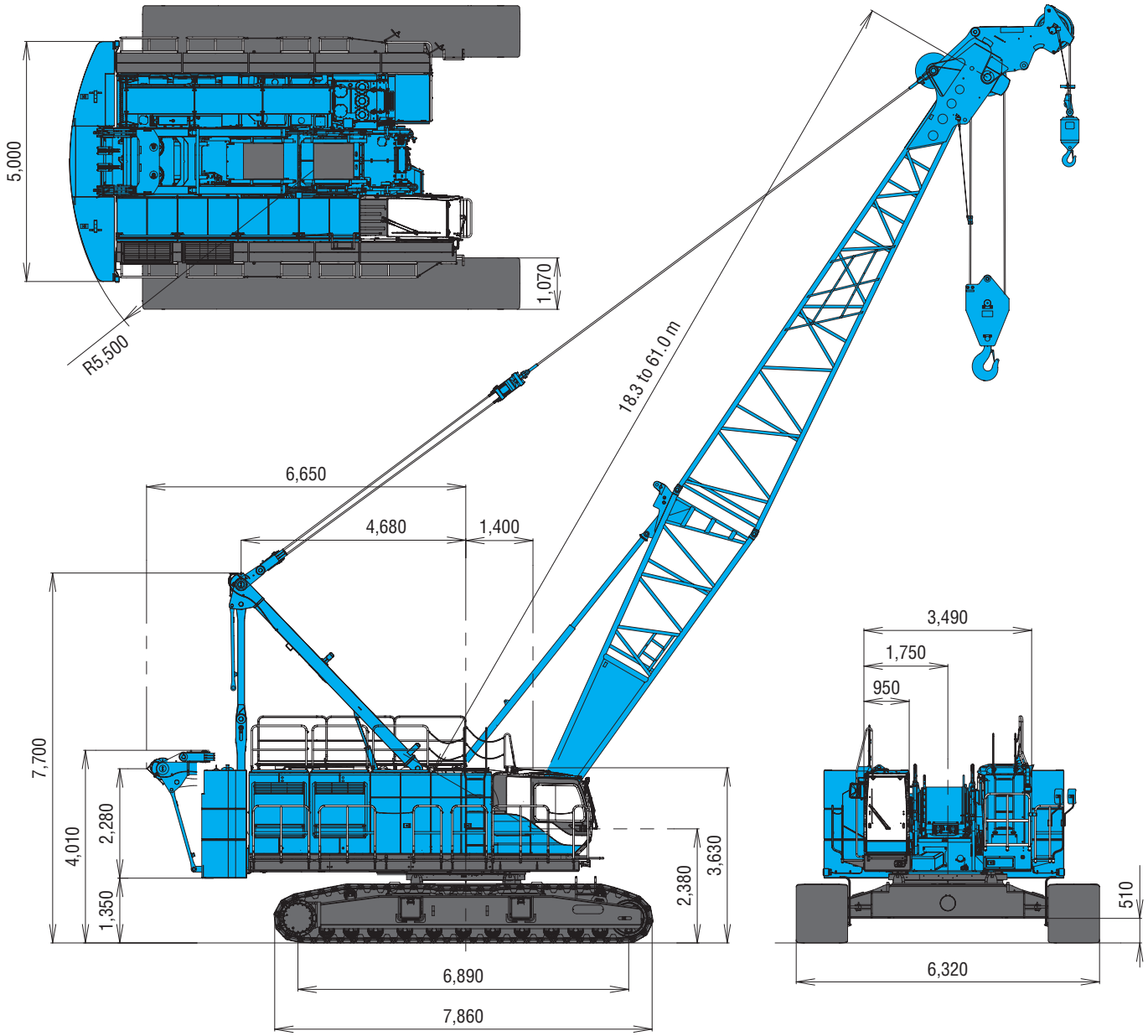
Crane Boom	
Max. Lifting Capacity	120 t x 5.0 m
Max. Length	61.0 m
Main & Aux. Winch	
Max. Line Speed (1st layer)	110 m/min
Rated Line Pull (Single line)	157 kN {16.0 tf}
Wire Rope Diameter	36 mm
Wire Rope Length	245 m (Main), 175 m (Aux.)
Brake Type (free fall)	Wet-type multiple disc brake (Standard)
Working Speed	
Swing Speed	2.1 min^{-1}{rpm}
Travel Speed	1.2/0.8 km/h
Power Plant	
Model	MTU 12V2000
Engine Output	634 kW / 1,800 min^{-1}
Fuel Tank	900 liters

Hydraulic System	
Main Pumps	4 variable displacement
Max. Pressure	32 MPa {326 kgf/cm^2}
Hydraulic Tank Capacity	1,000 liters
Self-Removal Device	
	NA
Weight	
Operating Weight	116 t *1
Ground Pressure	79 kPa
Counterweight	32,500 kg
Transport Weight	46,900 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, 32.5 ton counterweight, basic boom, hook, and other accessories.
*2 Base machine with gantry, wire rope (front/rear/boom hoist), without crawler, auxiliary platform and duct.

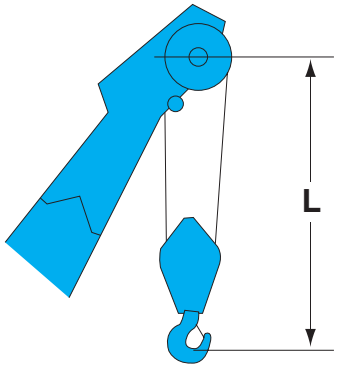
GENERAL DIMENSIONS

(Unit: mm)

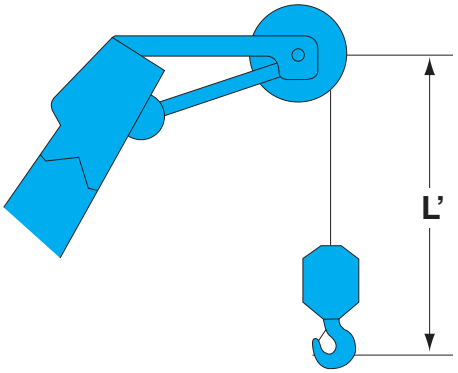


This catalog may contain photographs of machines with specifications, attachments and optional equipment.

Limit of Hook Lifting

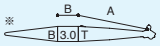
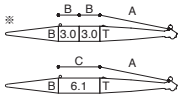
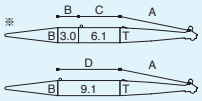
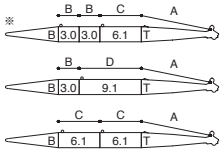
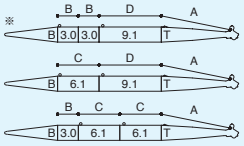
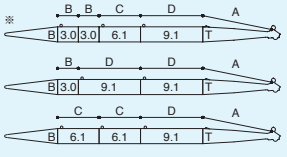
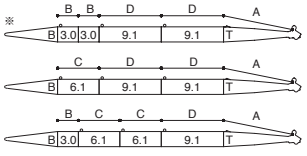


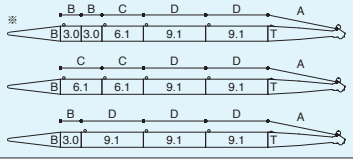
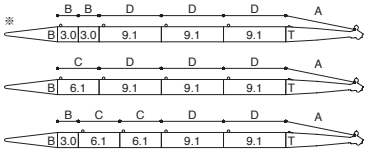
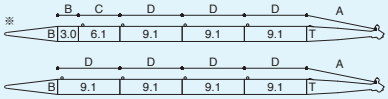
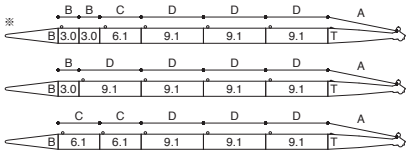
Hook	L
120 t hook	4.7 m
70 t hook	4.7 m
50 t hook	4.5 m



Hook	L'
Ball hook	4.2 m

Crane Boom Arrangements

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

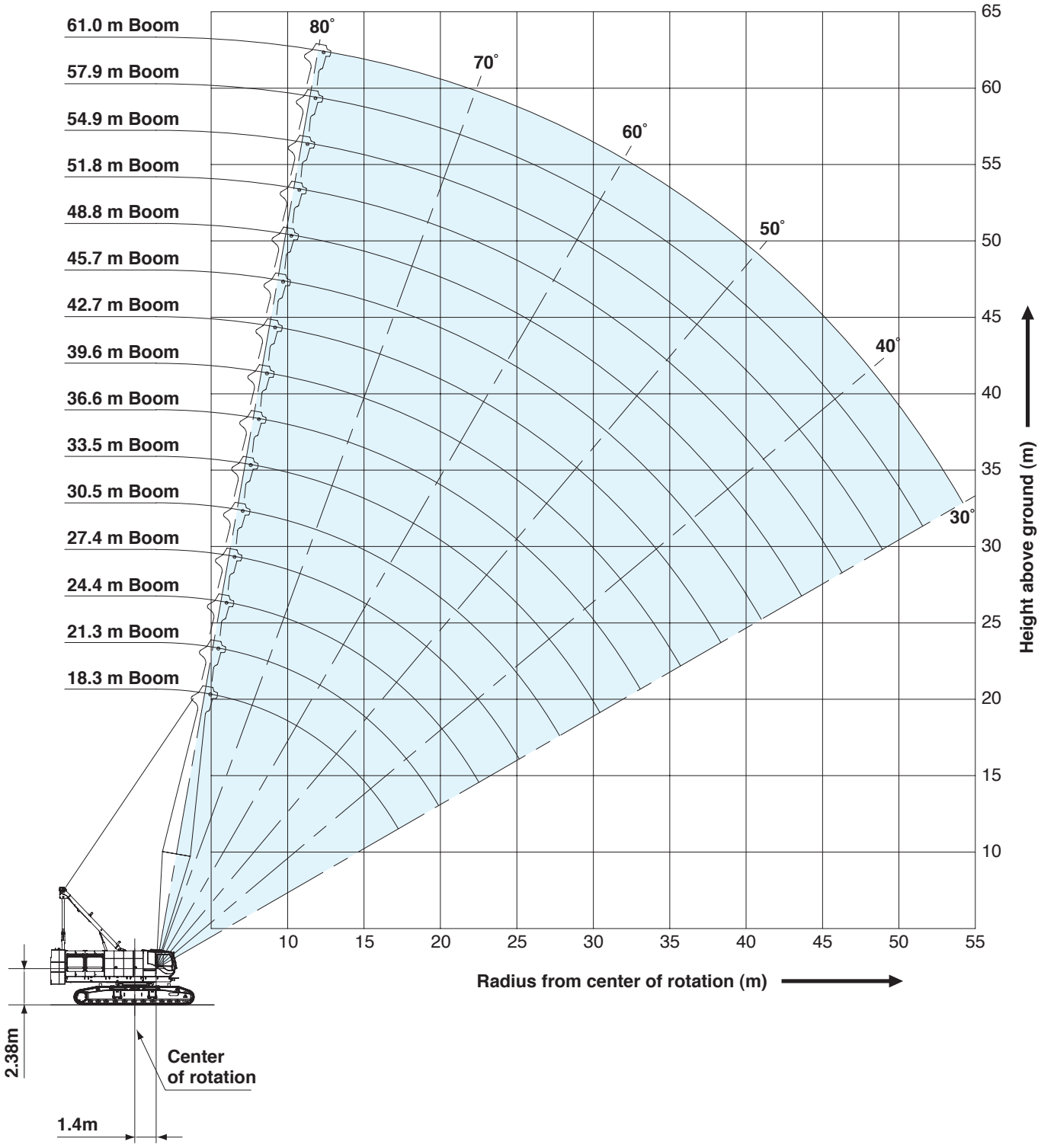
Boom length m (ft)	Boom arrangement
45.7 (150)	
48.8 (160)	
51.8 (170)	
54.9 (180)	
57.9 (190)	
61.0 (200)	

Kind of boom insert	
Symbol	Length
3.0	3.0 m
6.1	6.1 m
9.1	9.1 m

※ mark shows the standard boom arrangement which enables each boom length of less than that boom length to be configured.

Crane Boom

Unit : m



SUPPLEMENTAL DATA

- 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.
- The minimum rated load is 1.5 (ton).

(Main boom)

- 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.

(Main boom with auxiliary sheave frame)

- 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 main boom with auxiliary sheave ratings shown.

(Auxiliary sheave)

- The total load that can be lifted is the value for weight of hook block, slings, and all other load handling accessories deducted from auxiliary sheave ratings shown.
- Boom lengths for auxiliary sheave mounting are 18.3m to 54.9m.

Main hoist loads (Main Drum)

No. of Parts of Line	1	2	3	4	5	6
Maximum Loads (kN)	157	294	441	588	735	883
Maximum Loads (t)	16.0	30.0	45.0	60.0	75.0	90.0

No. of Parts of Line	7	8
Maximum Loads (kN)	1,030	1,177
Maximum Loads (t)	105.0	120.0

Auxiliary hoist loads

No. of Parts of Line	1	2
Maximum Loads (kN)	157	294
Maximum Loads (t)	16.0	30.0

Main hoist loads (Third Drum)

No. of Parts of Line	1	2	3	4	5	6
Maximum Loads (kN)	132	265	397	530	662	794
Maximum Loads (t)	13.5	27.0	40.5	54.0	67.5	81.0

No. of Parts of Line	7	8
Maximum Loads (kN)	927	981
Maximum Loads (t)	94.5	100.0

Weight of hook block			
Hook Block	120 t	70 t / 50 t	16 t
Weight (t)	1.6	1.2	0.5

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

LIFTING CAPACITIES

Crane Boom Lifting Capacities

Counterweight: 32.5 t
Unit: metric ton

Working radius (m) \ Boom length (m)	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	Boom length (m) \ Working radius (m)
5.0	120.0								**5.0**
5.5	100.0								**5.5**
6.0	91.6	91.5	91.4	6.5m/84.2					**6.0**
7.0	78.2	78.0	77.9	77.8	7.1m/76.5	7.6m/68.1			**7.0**
8.0	62.9	62.7	62.6	62.5	62.3	62.2	8.1m/60.9	8.6m/55.2	**8.0**
9.0	52.5	52.2	52.1	52.0	51.8	51.7	51.6	51.5	**9.0**
10.0	44.9	44.6	44.5	44.4	44.2	44.1	44.0	43.9	**10.0**
12.0	34.6	34.4	34.3	34.1	33.9	33.8	33.7	33.6	**12.0**
14.0	28.0	27.8	27.6	27.5	27.3	27.2	27.1	27.0	**14.0**
16.0	23.3	23.2	23.0	22.9	22.6	22.5	22.4	22.3	**16.0**
18.0	17.4m/19.0	19.8	19.5	19.5	19.2	19.1	19.0	18.9	**18.0**
20.0		16.2	17.0	16.9	16.6	16.5	16.3	16.2	**20.0**
22.0			15.0	14.8	14.5	14.4	14.2	14.1	**22.0**
24.0			22.7m/13.9	13.2	12.9	12.7	12.5	12.4	**24.0**
26.0				25.3m/12.0	11.5	11.3	11.1	11.0	**26.0**
28.0					10.3	10.2	10.0	9.9	**28.0**
30.0						9.2	9.0	8.9	**30.0**
32.0						30.6m/8.9	8.2	8.1	**32.0**
34.0							33.3m/7.5	7.4	**34.0**
36.0								35.9m/6.7	**36.0**
Reeves	8	7	7	6	6	5	5	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)
9.0	9.2m/50.2	9.7m/45.9						**9.0**
10.0	43.8	43.7	10.2m/42.2	10.8m/39.2	11.3m/36.4	11.8m/33.9		**10.0**
12.0	33.5	33.3	33.2	33.1	33.0	32.9	12.3m/29.0	**12.0**
14.0	26.8	26.7	26.6	26.5	26.4	26.2	26.0	**14.0**
16.0	22.2	22.0	21.9	21.8	21.7	21.5	21.3	**16.0**
18.0	18.7	18.6	18.5	18.4	18.2	18.1	17.8	**18.0**
20.0	16.1	15.9	15.8	15.7	15.6	15.4	15.2	**20.0**
22.0	14.0	13.8	13.7	13.6	13.5	13.3	13.1	**22.0**
24.0	12.3	12.1	12.0	11.9	11.8	11.6	11.4	**24.0**
26.0	10.9	10.7	10.6	10.5	10.4	10.2	10.0	**26.0**
28.0	9.8	9.6	9.4	9.3	9.2	9.0	8.8	**28.0**
30.0	8.8	8.6	8.4	8.3	8.2	8.0	7.8	**30.0**
32.0	7.9	7.7	7.6	7.5	7.3	7.1	6.9	**32.0**
34.0	7.2	7.0	6.8	6.7	6.6	6.4	6.2	**34.0**
36.0	6.5	6.3	6.2	6.1	5.9	5.7	5.5	**36.0**
38.0	6.0	5.8	5.6	5.5	5.3	5.1	4.9	**38.0**
40.0	38.5m/5.8	5.3	5.1	5.0	4.8	4.6	4.4	**40.0**
42.0		41.2m/4.9	4.6	4.5	4.4	4.2	3.9	**42.0**
44.0			43.8m/4.0	4.2	4.0	3.7	3.4	**44.0**
46.0				3.6	3.5	3.3	2.9	**46.0**
48.0				46.5m/3.4	3.1	2.9	2.5	**48.0**
50.0					49.1m/2.8	2.5	2.1	**50.0**
52.0						51.7m/2.1	1.8	**52.0**
54.0							1.5	**54.0**
56.0							54.4m/1.5	**56.0**
Reeves	4	4	3	3	3	3	2	**Reeves**

Note:
Ratings according to Japanese Construction Codes for Mobile Cranes and Japanese Safety Ordinance on Cranes, etc.
The total load that can be lifted is the value for weight of hook block, slings, and
all other load handling accessories reduced from main boom ratings shown.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

LIFTING CAPACITIES

Crane Boom Lifting Capacities (Third Drum)

Counterweight: 32.5 t
Unit: metric ton

Working radius (m) \ Boom length (m)	18.3	21.3	24.4	27.4	30.5	33.5	Boom length (m) \ Working radius (m)
5.0	100.0						**5.0**
5.5	100.0						**5.5**
6.0	91.6	91.5	91.4	6.5m/81.0			**6.0**
7.0	78.2	78.0	77.9	77.8	7.1m/67.5	7.6m/67.5	**7.0**
8.0	62.9	62.7	62.6	62.5	62.3	62.2	**8.0**
9.0	52.5	52.2	52.1	52.0	51.8	51.7	**9.0**
10.0	44.9	44.6	44.5	44.4	44.2	44.1	**10.0**
12.0	34.6	34.4	34.3	34.1	33.9	33.8	**12.0**
14.0	28.0	27.8	27.6	27.5	27.3	27.2	**14.0**
16.0	23.3	23.2	23.0	22.9	22.6	22.5	**16.0**
18.0	17.4m/19.0	19.8	19.5	19.5	19.2	19.1	**18.0**
20.0		16.2	17.0	16.9	16.6	16.5	**20.0**
22.0			15.0	14.8	14.5	14.4	**22.0**
24.0			22.7m/13.9	13.2	12.9	12.7	**24.0**
26.0				25.3m/12.0	11.5	11.3	**26.0**
28.0					10.3	10.2	**28.0**
30.0						9.2	**30.0**
32.0						30.6m/8.9	**32.0**
Reeves	8	7	7	6	5	5	**Reeves**

Note:
Ratings according to Japanese Construction Codes for Mobile Cranes and Japanese Safety Ordinance on Cranes, etc.
The total load that can be lifted is the value for weight of hook block, slings, and
all other load handling accessories reduced from main boom ratings shown.
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.

(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.

Main hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	157
Maximum Loads (t)	16.0

Assembling the counterweight

32.5 ton counterweight

No.3
No.2
No.1

Counterweights

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

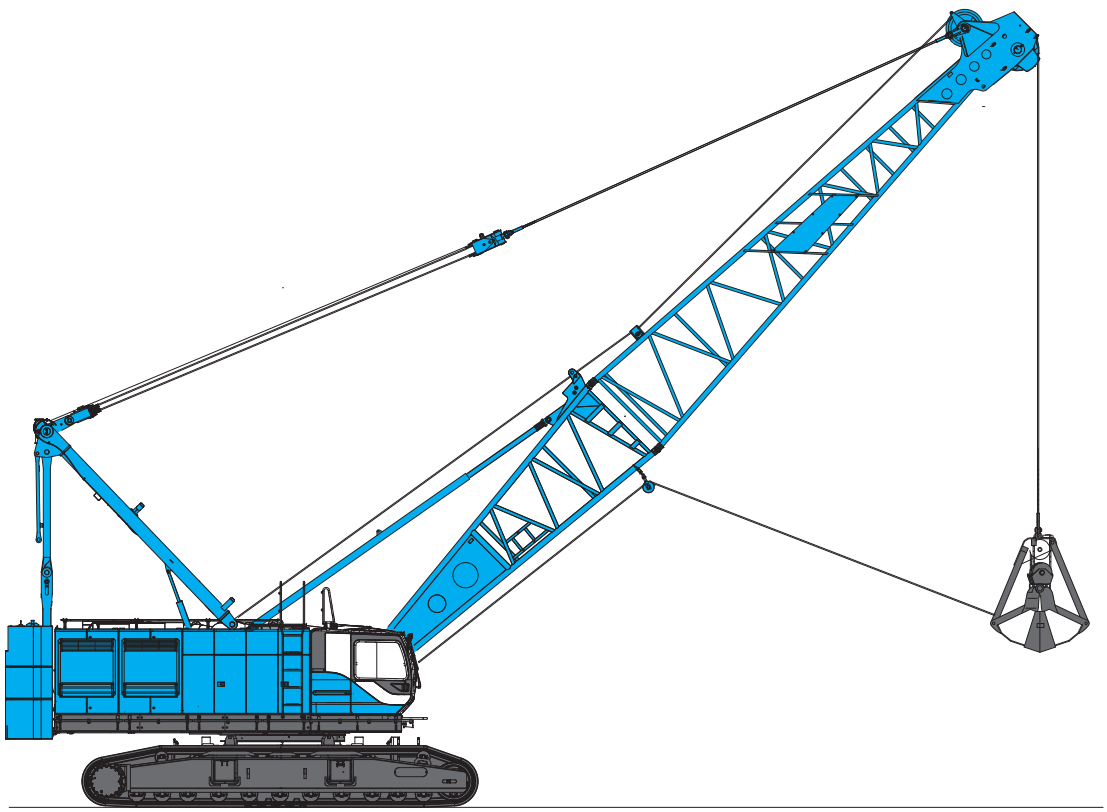
LIFTING CAPACITIES

Main Boom Rated Loads For Clamshell

Counterweight: 32.5 t
Unit: metric ton

Working radius (m) \ Boom length (m)	18.3	21.3	24.4	27.4	30.5	33.5	Boom length (m) \ Working radius (m)
8.0	16.0						**8.0**
9.0	16.0						**9.0**
10.0	16.0	16.0					**10.0**
12.0	16.0	16.0	16.0	16.0			**12.0**
14.0	16.0	16.0	16.0	13.9	12.1		**14.0**
16.0	16.0	16.0	14.9	13.3	11.8	10.6	**16.0**
18.0		14.3	13.7	12.3	10.9	9.7	**18.0**
20.0			12.0	11.3	10.0	9.0	**20.0**
22.0				10.4	9.3	8.3	**22.0**
24.0					8.5	7.6	**24.0**
26.0					7.8	7.0	**26.0**
28.0						6.4	**28.0**
Reeves	1	1	1	1	1	1	**Reeves**

Note:
Ratings according to Japanese Construction Codes for Mobile Cranes and Japanese Safety Ordinance on Cranes, etc.
The total load that can be lifted is the value for weight of hook block, slings, and
all other load handling accessories reduced from main boom ratings shown.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.



SUPPLEMENTAL DATA FOR BUCKET 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 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.

(Main boom)

- 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.

(Main boom with auxiliary sheave frame)

- 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 main boom with auxiliary sheave ratings shown.

(Auxiliary sheave)

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

Main hoist loads (Third Drum)

No. of Parts of Line	1	2	3	4	5	6
Maximum Loads (kN)	132	265	397	530	662	794
Maximum Loads (t)	13.5	27.0	40.5	54.0	67.5	81.0

No. of Parts of Line	7	8
Maximum Loads (kN)	927	981
Maximum Loads (t)	94.5	100.0

Auxiliary hoist loads (For Bucket)

No. of Parts of Line	1+1
Maximum Loads (kN)	319
Maximum Loads (t)	32.5

Weight of hook block			
Hook Block	120 t	70 t / 50 t	16 t
Weight (t)	1.6	1.2	0.5

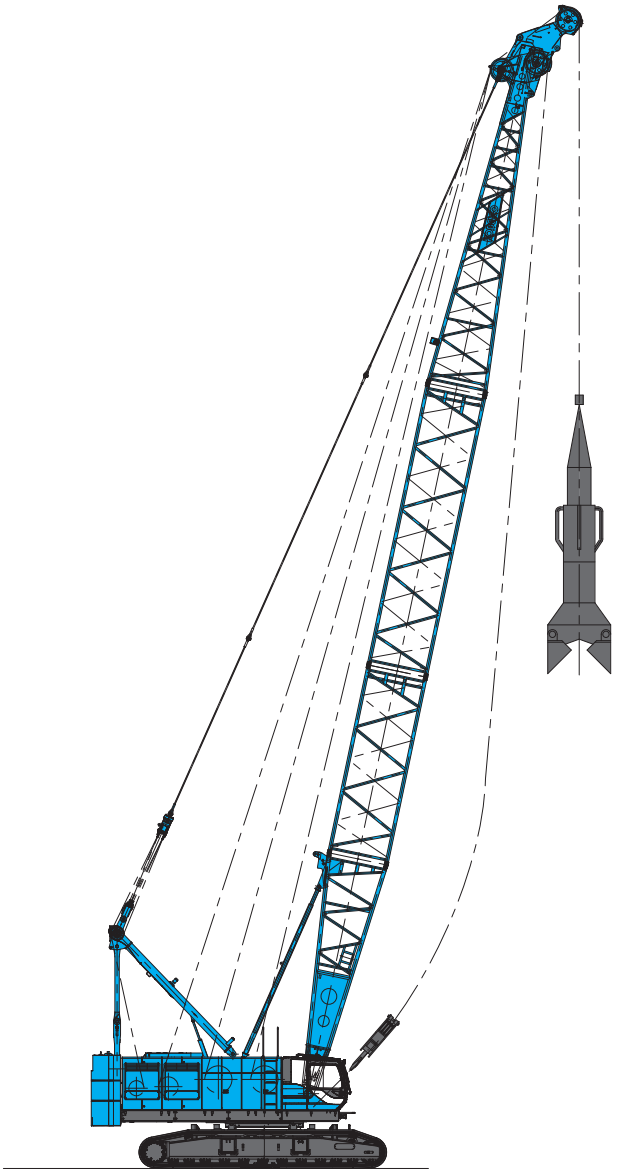
Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

Bucket Rating Charts Auxiliary Sheave Lifting Capacities (with Aux. Sheave, 16t Aux. Hook Blocks, without Main Hook Block)

Counterweight: 32.5 t
Unit: metric ton

Load radius (m) \ Boom length (m)	18.3	21.3	24.4	27.4	30.5	33.5	Boom length (m) \ Load radius (m)
6.0	6.3m/32.5	6.8m/32.5					**6.0**
7.0	32.5	32.5	7.3m/32.5	7.9m/32.5			**7.0**
8.0	32.5	32.5	32.5	32.5	8.4m/32.5	8.9m/32.5	**8.0**
9.0	32.5	32.5	32.5	32.5	32.5	32.5	**9.0**
10.0	32.5	32.5	32.5	32.5	32.5	32.5	**10.0**
12.0	32.5	32.5	32.5	32.5	32.5	32.5	**12.0**
14.0	26.7	26.5	26.3	26.2	26.0	25.9	**14.0**
16.0	22.0	21.9	21.7	21.6	21.3	21.2	**16.0**
18.0	15.9	18.5	18.2	18.2	17.9	17.8	**18.0**
20.0	18.8m/13.4	14.9	15.7	15.6	15.3	15.2	**20.0**
22.0		21.4m/12.4	13.7	13.5	13.2	13.1	**22.0**
24.0			10.6	11.9	11.6	11.4	**24.0**
26.0			24.1m/10.4	10.1	10.2	10.0	**26.0**
28.0				26.7m/9.4	9.0	8.9	**28.0**
30.0					29.3m/8.2	7.9	**30.0**
32.0						6.9	**32.0**
Reeves	1+1	1+1	1+1	1+1	1+1	1+1	**Reeves**

Note:
Ratings according to Japanese Construction Codes for Mobile Cranes and Japanese Safety Ordinance on Cranes, etc.
The total load that can be lifted is the value for weight of hook block, slings, and
all other load handling accessories reduced from main boom ratings shown.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

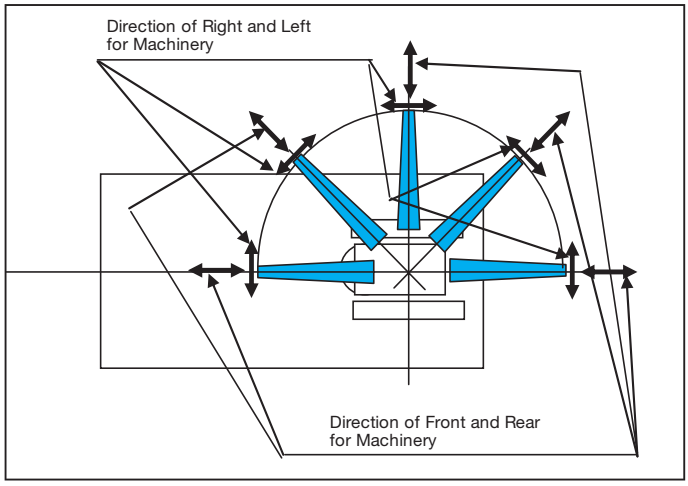


SUPPLEMENTAL DATA FOR BARGE RATING CHART

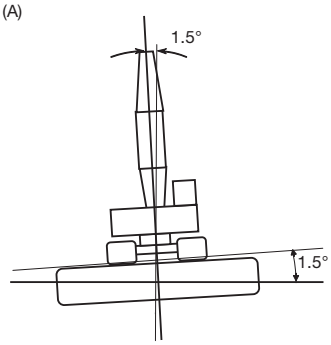
- Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
- Deduct weight of hook block(s), slings and all other load handling accessories from main boom ratings shown.
- Condition of barge stability this rating chart were determined under the condition below. The stability of barge shall meet below condition. During operation the machinery static inclination against horizontal level.

(A) Both sides (right & left) of machine
Maximum inclination shall be within 1.5 Degrees

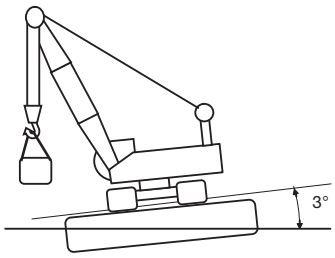
(B) Front & backward of macine
Maximum inclination shall be within 3.0 Degrees



(A)



(B)



- Working area shall be inshore and smooth water.
- Applicable regulations for structure japanese construction codes for mobil crane
  ※Regulation of class of shipping (abs, lloyd, bv, nk, etc) are not adapted.
- 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 2.0 (ton).
- The machinery should be fastened to the deck of the barge to prevent tip over and sliding.
- Towing area
  Towing area shall be within coastal area and quiet wave condition. Offshore and open sea is not considered for this machinery. Depend on the height of wave, counterweight shall be reduced during towing.

(Crane boom)

- 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.

<Reference Information>

Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	157	294	441	588	686
Maximum Loads (t)	16.0	30.0	45.0	60.0	70.0

Auxiliary hoist loads

No. of Parts of Line	1	2
Maximum Loads (kN)	157	294
Maximum Loads (t)	16.0	30.0

Weight of hook block			
Hook Block	70 t	50 t	Ball Hook
Weight (t)	1.2	1.2	0.45

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

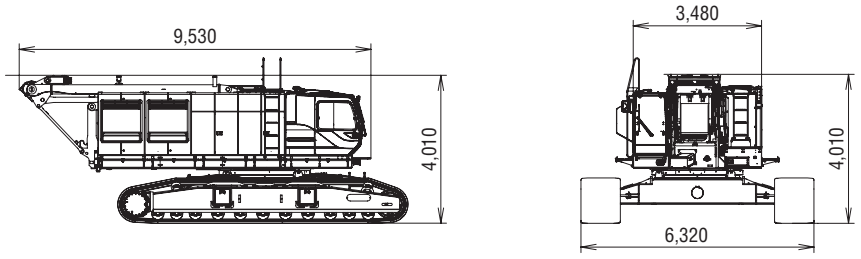
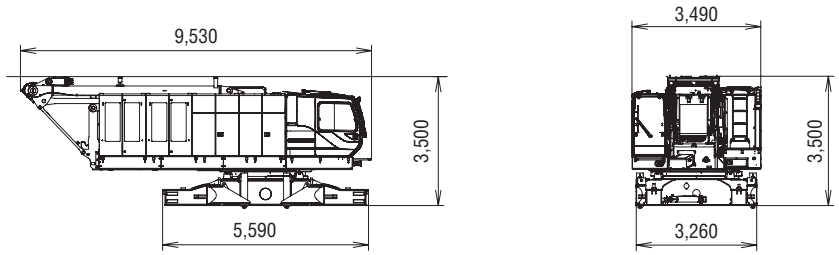
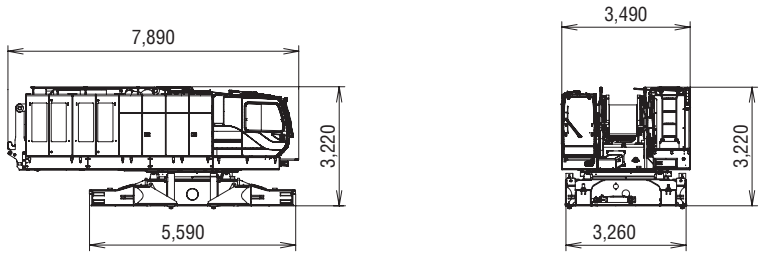
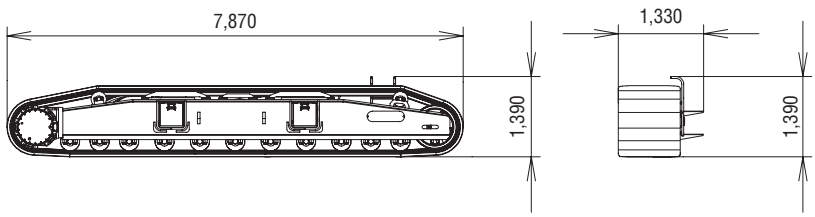
Barge Rating Chart
Crane Boom Lifting Capacities

Unit: metric tons

Load radius (m) \ Boom length (m)	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	Boom length (m) \ Load radius (m)
6.0	70.0								**6.0**
7.0	60.0	59.8							**7.0**
8.0	50.0	49.8	49.6						**8.0**
9.0	42.8	42.6	42.4	42.2					**9.0**
10.0	37.0	36.8	36.6	36.5	36.3	36.2			**10.0**
12.0	28.6	28.4	28.2	28.0	27.8	27.7	27.6	27.5	**12.0**
14.0	23.3	23.1	23.0	22.9	22.7	22.6	22.5	22.4	**14.0**
16.0	19.5	19.3	19.2	19.1	18.8	18.7	18.6	18.5	**16.0**
18.0		16.5	16.4	16.3	16.0	15.9	15.8	15.7	**18.0**
20.0			14.3	14.2	13.9	13.8	13.7	13.6	**20.0**
22.0			12.6	12.4	12.1	12.0	11.9	11.8	**22.0**
24.0				10.5	10.4	10.3	10.2	10.1	**24.0**
26.0					9.6	9.5	9.4	9.3	**26.0**
28.0						8.6	8.4	8.4	**28.0**
30.0						7.8	7.6	7.5	**30.0**
32.0							6.8	6.8	**32.0**
34.0								6.2	**34.0**

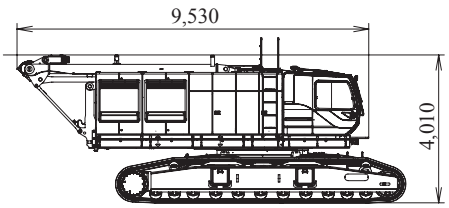
Note:
Ratings according to Japanese Construction Codes for Mobile Cranes and Japanese Safety Ordinance on Cranes, etc.
The total load that can be lifted is the value for weight of hook block, slings, and
all other load handling accessories reduced from main boom ratings shown.
Lifting capacities may vary depending on hook used or with/without auxiliary sheave.
Please refer rated chart in operator's cabin.

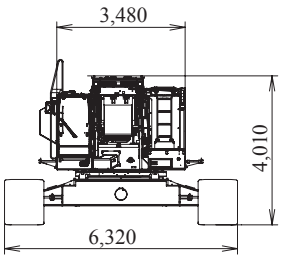
TRANSPORTATION PLAN

Name	Dimension (mm)	Weight (kg)
Base Machine • Gantry • Crawler • Wire rope (Front / boom hoist)		74,100
Base Machine • Gantry • Wire rope (Front / rear / boom hoist) • Without crawler • Without auxiliary platform • Without duct		46,900
Base Machine • Wire rope (Front / rear / boom hoist) • Without gantry • Without crawler • Without auxiliary platform • Without duct		44,400
Crawler		13,600 x 2

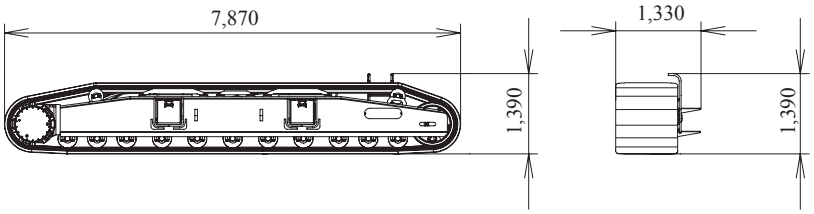
PARTS AND ATTACHMENTS

Base Machine
Gantry, Crawler, Wire rope (Front /boom hoist),
Weight: 74,100 kg Width: 6,320 mm

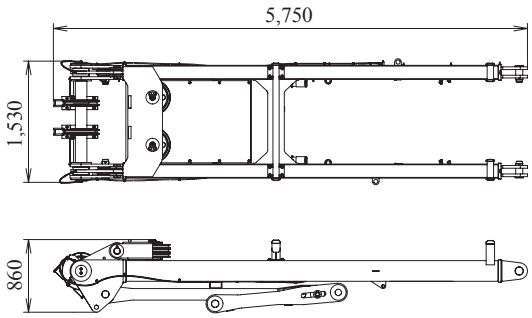




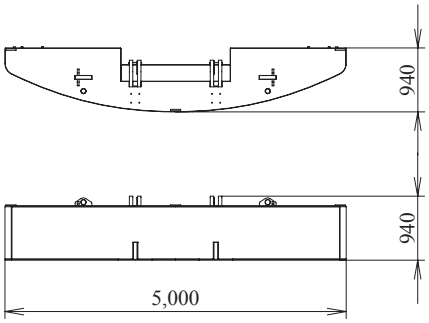
Crawler
Weight: 13,600 kg



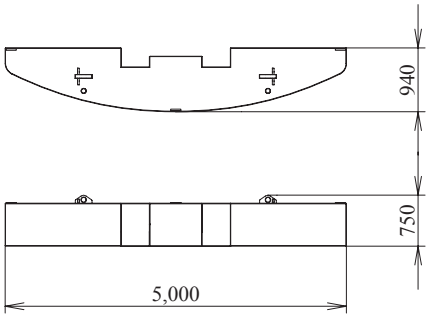
Gantry (with lower spreader)
Weight: 2,500 kg



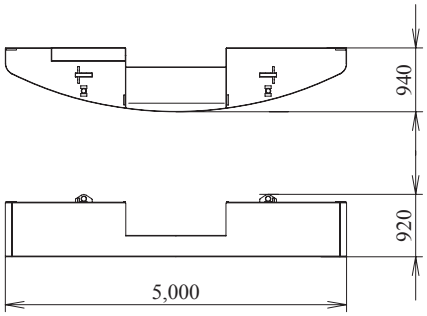
Counterweight No.1
Weight: 12,500 kg



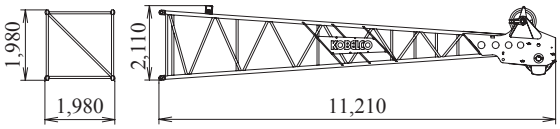
Counterweight No.2
Weight: 10,000 kg



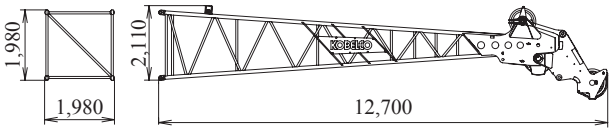
Counterweight No.3
Weight: 10,000 kg



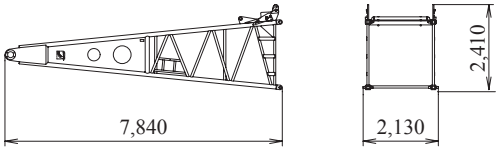
Boom Top
Weight: 2,840 kg



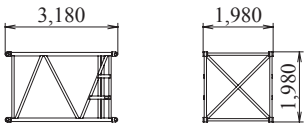
Boom Top (with aux. sheave)
Weight: 4,130 kg



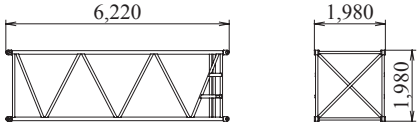
Boom Base
Weight: 2,450 kg



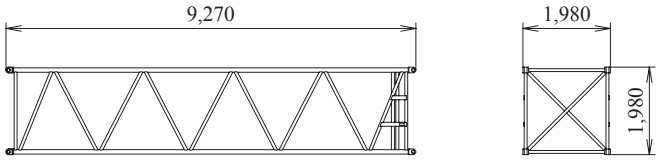
3.0 m (10 ft) Boom Insert
Weight: 500 kg



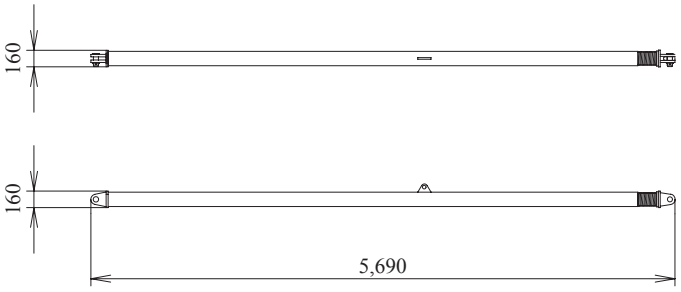
6.1 m (20 ft) Boom Insert
Weight: 810 kg



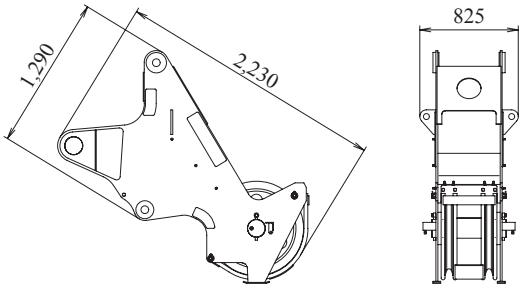
9.1 m (30 ft) Boom Insert
Weight: 1,130 kg



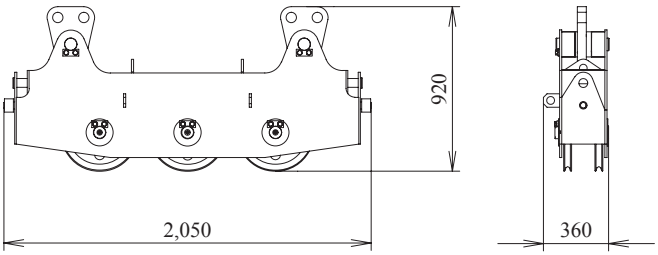
Crane Backstop
Weight: 330 kg



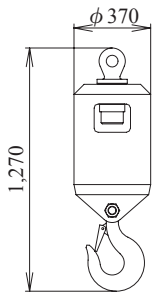
Auxiliary Sheave
Weight: 940 kg



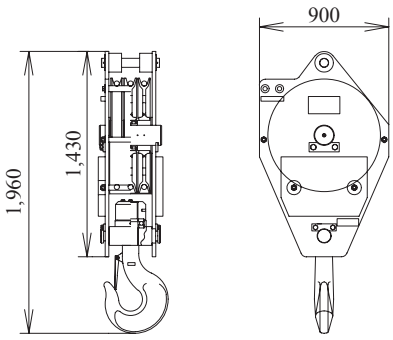
Boom Hoist Upper Spreader
Weight: 480 kg



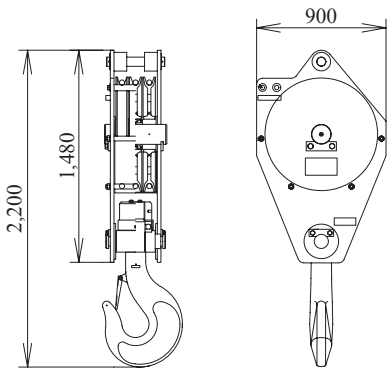
16 t Ball Hook
Weight: 460 kg



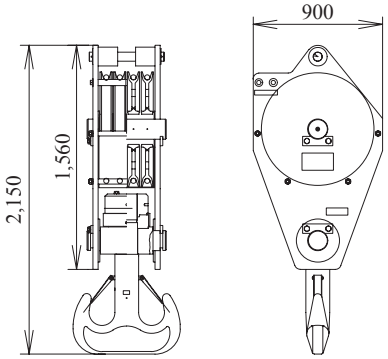
50 t Hook
Weight: 1,200 kg



70 t Hook
Weight: 1,200 kg



120 t Hook
Weight: 1,550 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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