

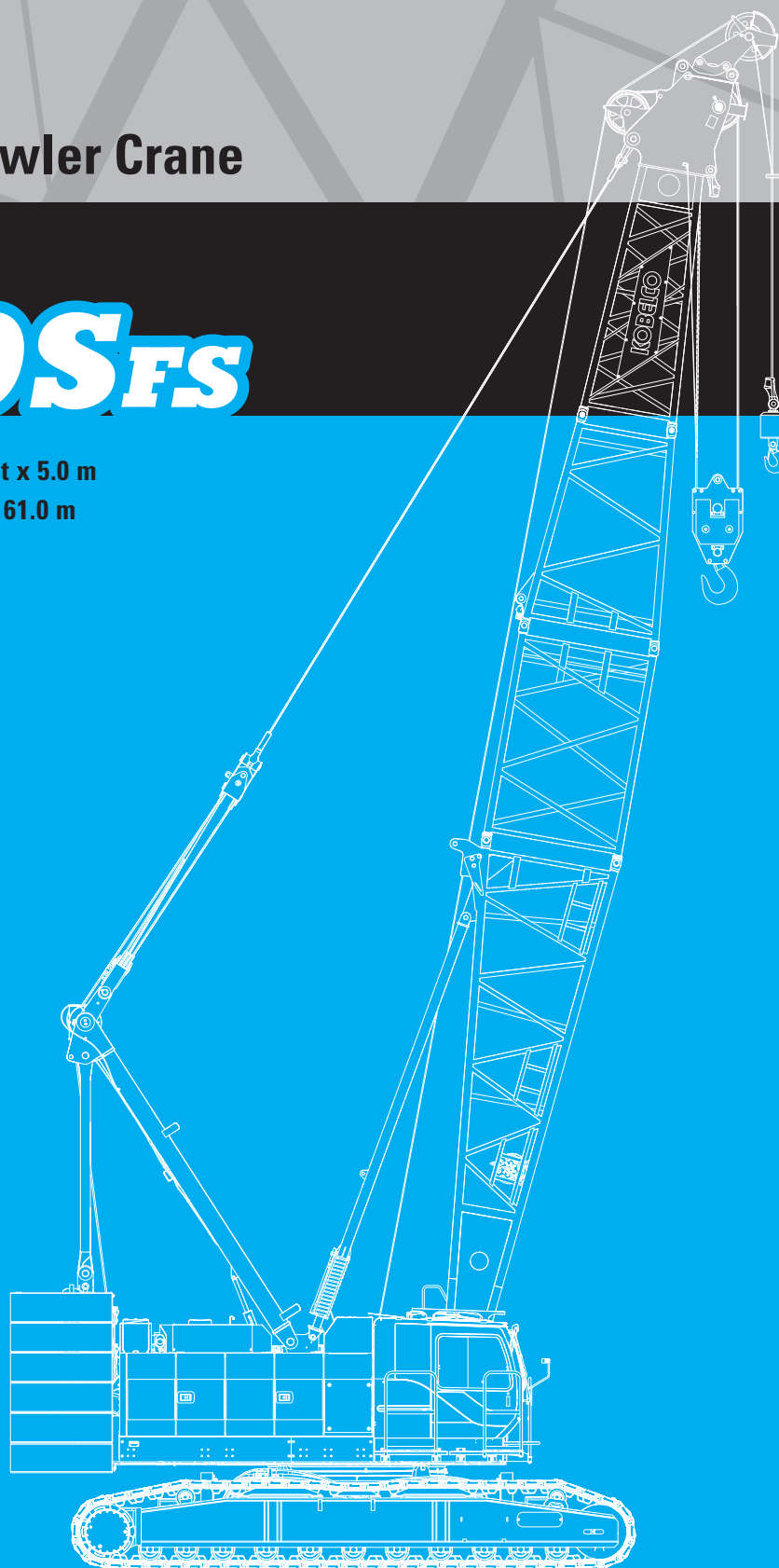
## Hydraulic Crawler Crane

# 7120S<sub>FS</sub>

Max. Lifting Capacity: **120 t x 5.0 m**

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

Model : 7120S



# KOBELCO



# 7120SFS

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# SPECIFICATIONS



## Power Plant

**Model:** HINO P11C-VH

**Type:** 4 cycle, water-cooled, vertical in-line 6, direct injection, turbo-charger, intercooler

**Displacement:** 10,520 liters

**Rated power:** 271 kW/1,850 min<sup>-1</sup>

**Max. Torque:** 1,469 N·m/1,400 min<sup>-1</sup>

**Cooling System:** Water-cooled

**Starter:** 24V-6kW

**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 12 V x 136 Ah/5HR capacity batteries, series connected

**Fuel tank capacity:** 400 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:** 31.9 MPa

**Swing system:** 27.5 MPa

**Control system:** 5.4 MPa

**Hydraulic Tank Capacity:** 535 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 3 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 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.

**Drum Lock:** External ratchet for locking drum

**Drums:**

**Front Drums:**

622 mm P.C.D x 617 mm wide drum, grooved for 30 mm wire rope. Rope capacity is 200 m working length and 268 m storage length.

**Rear Drum:** 622 mm P.C.D x 617 mm, grooved for 30 mm wire rope. Rope capacity is 130 m working length and 268 m storage length.

**Diameter of wire rope**

**Main winch:** 30 mm x 200 m

**Aux. winch:** 30 mm x 130 m

**Third winch:** 26 mm x 260 m

**Line Speed\*:**

**Hoisting/lowering:** 110 to 3 m/min

**Line Pull:**

**Max. Line Pull\*:** 250 kN {25.5 tf}  
(Referential performance)

**Rated Line Pull:** 152 kN {15.5 tf}

\*Single line on first drum layer



## Swing System

Swing unit is powered by hydraulic motor driving spur gears through planetary reducer, 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<sup>-1</sup>



## Upper Structure

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

**Counterweight:** 59.1 t



## 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.

**Carbody weight:** 10.8 t

**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):** 910 mm wide each crawler

**Max. gradeability:** 30%

**Weight**

Including upper and lower machine, 59.1 ton counterweight and 10.8 ton carbody weight, basic boom (or basic boom + basic jib), hook, and other accessories.

**Weight:** 137 ton

**Ground pressure:** 107 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	15.2 m	61.0 m

**Main Specifications (Model: 7120S)**

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)	152 kN {15.5 tf}
Wire Rope Diameter	30 mm
Wire Rope Length	200m (Main), 130 m (Aux.)
Brake Type (Free fall)	Wet-type multiple disc brake
Working Speed	
Swing Speed	2.1 min <sup>-1</sup> {rpm}
Travel Speed	1.3/0.9 km/h
Power Plant	
Model	HINO P11C-VH
Engine Output	271 kW/1,850 min <sup>-1</sup>
Fuel Tank	400 liters

**Hydraulic System**

Main Pumps	4 variable displacement
Max. Pressure	31.9 MPa {325 kgf/cm <sup>2</sup> }
Hydraulic Tank Capacity	535 liters

**Self-Removal Device**

	NA
--	----

**Weight**

Operating Weight	137 t <sup>*1</sup>
Ground Pressure	107 kPa
Counterweight	59,110 kg
Transport Weight	37,800 kg <sup>*2</sup>

Units are SI units. { } indicates conventional units.

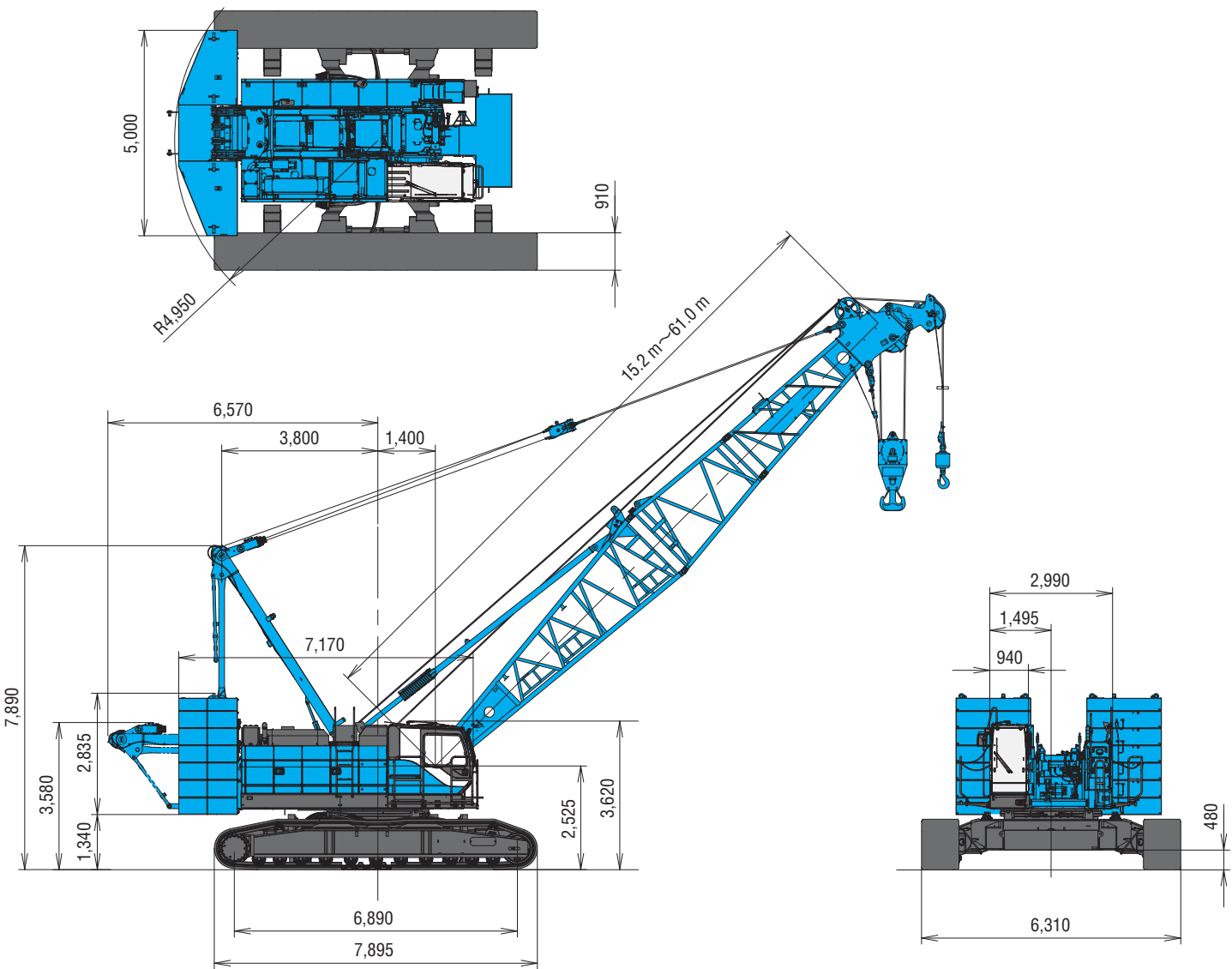
Line speeds in table are for light loads. Line speed varies with load.

<sup>\*1</sup> Including upper and lower machine, 59.1 ton counterweight, 10.8 ton carbody weight, basic boom, 120 t hook, and other accessories.

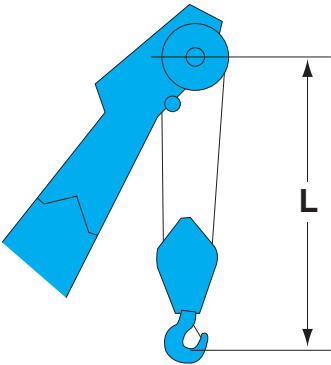
<sup>\*2</sup> Base Machine with boom base gantry, wire ropes (front/rear/third/boom hoist)

# GENERAL DIMENSIONS

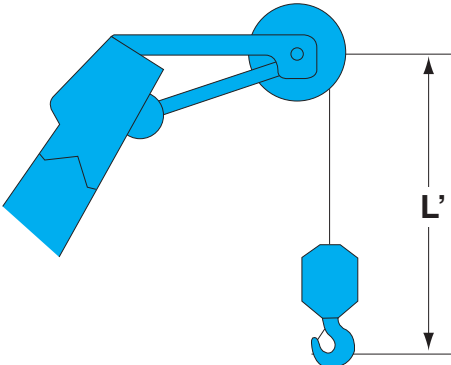
(Unit: mm)



## Limit of Hook Lifting



Hook	L
120 t hook	5.0 m
70 t hook	5.0 m
50 t hook	5.0 m
35 t hook	5.0 m



Hook	L'
Ball hook	4.2 m

# BOOM AND JIB ARRANGEMENTS

## Crane Boom Arrangements

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

Boom length m (ft)	Boom arrangement
42.7 (140)	
45.7 (150)	
48.8 (160)	
51.8 (170)	
54.9 (180)	
57.9 (190)	
61.0 (200)	

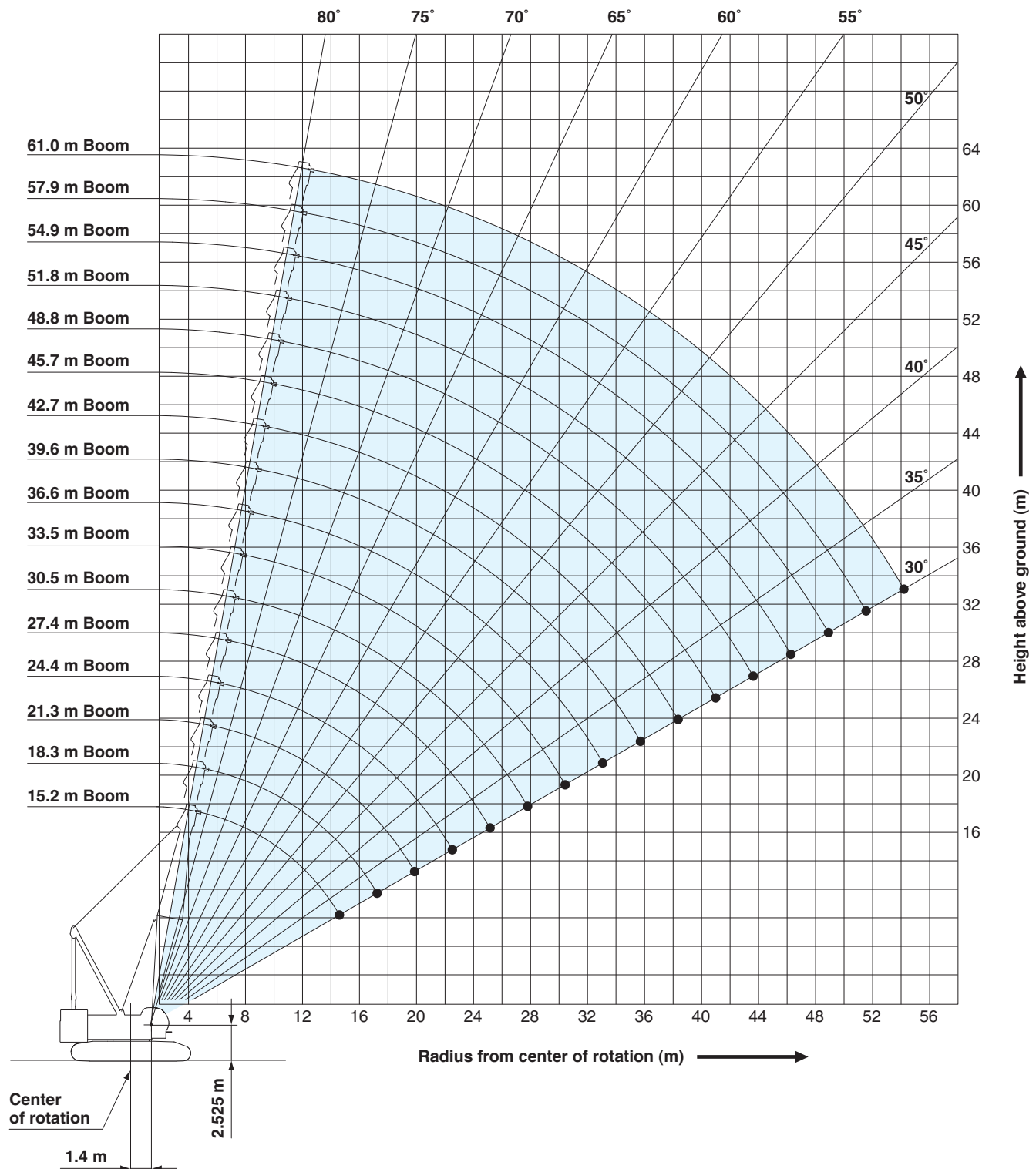
Symbol	Boom Length	Remarks
	7.6 m	Boom Base
	4.6 m	Boom Top
	3.0 m	Tapered Boom
	3.0 m	Insert Boom
	6.1 m	Insert Boom
	9.1 m	Insert Boom

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

# WORKING RANGES

## Crane Boom

Unit: m





# SUPPLEMENTAL DATA

- Ratings according to Japanese Construction Codes for Mobile Cranes.
- 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 2.0 (t).

## (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 auxiliary sheave hook block, slings, and all other load handling accessories deducted from auxiliary sheave ratings shown.
- Standard boom lengths for auxiliary sheave mounting are 15.2 m to 61.0 m.

## Main hoist loads (Front drum)

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	152	275	412	549	686
Maximum Loads (t)	15.5	28.0	42.0	56.0	70.0

No. of Parts of Line	6	7	8	9
Maximum Loads (kN)	824	961	1,098	1,177
Maximum Loads (t)	84.0	98.0	112.0	120.0

## Auxiliary hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	152
Maximum Loads (t)	15.5

## Main hoist loads (Third drum)

No. of Parts of Line	1*	2	3	4	5
Maximum Loads (kN)	-	235	353	471	588
Maximum Loads (t)	-	24.0	36.0	48.0	60.0

No. of Parts of Line	6	7	8	9	10
Maximum Loads (kN)	706	824	941	1,059	1,177
Maximum Loads (t)	72.0	84.0	96.0	108.0	120.0

## WARNING

- ※ If one part of lines selected, the boom erects and topples down to the back side when the hoisting operation of the hook is performed.

Weight of hook block						
Hook Block	120t	70t Double Hook	70t Single Hook	50t	35t	Ball Hook
Weight (t)	1.80	1.20	0.93	0.85	0.70	0.45

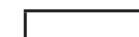
## Assembling the counterweight

59.1 t counterweight

10.8 t carbody weight

No.10	No.11
No.8	No.9
No.6	No.7
No.4	No.5
No.3	
No.2	
No.1	

Counterweights



Carbody weights

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

# LIFTING CAPACITIES



## Crane Boom Lifting Capacities

Counterweight: 59.1 t

Carbody weight: 10.8 t

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) \ Load radius (m)
4.5	120.0								4.5
5.0	120.0	5.1m/112.0	5.6m/98.0						5.0
6.0	110.4	110.1	98.0	6.1m/84.0	6.7m/70.0				6.0
7.0	95.1	94.8	93.3	84.0	70.0	7.2m/70.0	7.7m/56.0		7.0
8.0	79.6	79.9	79.1	77.4	70.0	70.0	56.0	8.2m/56.0	8.0
9.0	67.7	68.5	68.4	67.2	66.0	64.9	56.0	56.0	9.0
10.0	58.3	58.8	58.6	58.6	58.3	57.4	56.0	55.0	10.0
12.0	44.2	45.5	45.3	45.3	45.1	45.0	45.0	44.8	12.0
14.0	33.3	37.0	36.8	36.7	36.5	36.4	36.4	36.1	14.0
16.0	14.9m/29.1	29.8	30.8	30.7	30.6	30.4	30.3	30.1	16.0
18.0		17.5m/24.6	26.4	26.3	26.1	26.0	25.9	25.7	18.0
20.0			21.3	22.9	22.7	22.6	22.5	22.3	20.0
22.0			20.1m/21.0	19.7	20.0	19.9	19.8	19.6	22.0
24.0				22.8m/18.2	17.9	17.7	17.6	17.4	24.0
26.0					25.4m/15.8	16.0	15.8	15.6	26.0
28.0						13.9	14.3	14.1	28.0
30.0							12.9	12.8	30.0
32.0							30.7m/12.2	11.7	32.0
34.0								33.3m/10.7	34.0
Reeves	9	8	7	6	5	5	4	4	Reeves

Load radius (m) \ Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom length (m) \ Load radius (m)
8.0	8.8m/42.0								8.0
9.0	42.0	9.3m/42.0	9.8m/42.0						9.0
10.0	42.0	42.0	42.0	10.4m/28.0	10.9m/28.0	11.4m/28.0			10.0
12.0	42.0	42.0	42.0	28.0	28.0	28.0	28.0	12.5m/28.0	12.0
14.0	36.1	36.0	35.6	28.0	28.0	28.0	28.0	27.2	14.0
16.0	30.1	29.9	29.7	28.0	28.0	28.0	27.6	25.6	16.0
18.0	25.7	25.5	25.3	25.3	25.1	24.9	24.7	23.9	18.0
20.0	22.2	22.1	21.9	21.7	21.7	21.5	21.3	21.1	20.0
22.0	19.5	19.4	19.1	19.0	18.9	18.7	18.6	18.4	22.0
24.0	17.3	17.2	16.9	16.8	16.7	16.5	16.4	16.2	24.0
26.0	15.5	15.3	15.1	15.0	14.9	14.7	14.5	14.3	26.0
28.0	14.0	13.8	13.6	13.5	13.4	13.2	13.0	12.8	28.0
30.0	12.7	12.5	12.3	12.2	12.1	11.9	11.7	11.5	30.0
32.0	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.3	32.0
34.0	10.6	10.4	10.2	10.1	10.0	9.7	9.6	9.3	34.0
36.0	9.4	9.6	9.3	9.2	9.1	8.9	8.7	8.5	36.0
38.0		8.7	8.6	8.4	8.3	8.1	7.9	7.7	38.0
40.0		38.6m/8.3	7.8	7.8	7.7	7.4	7.3	7.0	40.0
42.0			41.2m/7.2	7.1	7.1	6.8	6.6	6.4	42.0
44.0				43.9m/6.2	6.4	6.3	6.1	5.9	44.0
46.0					5.6	5.7	5.6	5.3	46.0
48.0					46.5m/5.4	5.0	5.0	4.8	48.0
50.0						49.2m/4.5	4.4	4.3	50.0
52.0							51.8m/3.8	3.8	52.0
54.0								3.2	54.0
56.0								54.4m/3.0	56.0
Reeves	3	3	3	2	2	2	2	2	Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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.



# Crane Boom Lifting Capacities (Third Drum)

Counterweight: 59.1 t  
Carbody weight: 10.8 t

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) \ Load radius (m)
4.5	120.0								4.5
5.0	120.0	5.1m/116.6	5.6m/108.0						5.0
6.0	110.4	110.1	108.0	6.1m/98.9	6.7m/87.6				6.0
7.0	95.1	94.6	93.0	90.9	86.4	7.2m/78.3	7.7m/70.2		7.0
8.0	79.4	79.7	78.7	77.2	75.6	74.4	69.6	8.2m/60.0	8.0
9.0	67.6	68.6	68.1	67.0	65.7	64.6	62.5	60.0	9.0
10.0	58.2	58.8	58.6	58.5	58.1	57.1	56.2	55.0	10.0
12.0	44.1	45.6	45.4	45.2	45.1	45.0	44.9	44.8	12.0
14.0	33.3	37.0	36.8	36.7	36.5	36.4	36.3	36.2	14.0
16.0	14.9m/29.1	29.8	30.9	30.7	30.5	30.4	30.3	30.2	16.0
18.0		17.5m/24.6	26.5	26.3	26.1	26.0	25.9	25.7	18.0
20.0			21.3	22.9	22.7	22.6	22.5	22.3	20.0
22.0			20.1m/21.0	19.7	20.0	19.9	19.8	19.6	22.0
24.0				22.8m/18.2	17.9	17.7	17.6	17.4	24.0
26.0					25.4m/15.8	16.0	15.8	15.6	26.0
28.0						13.9	14.3	14.1	28.0
30.0							12.9	12.8	30.0
32.0							30.7m/12.2	11.7	32.0
34.0								33.3m/10.7	34.0
Reeves	10	10	9	9	8	7	6	5	Reeves

Load radius (m) \ Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom length (m) \ Load radius (m)
8.0	8.8m/57.4								8.0
9.0	57.0	9.3m/48.0	9.8m/46.8						9.0
10.0	53.6	48.0	46.6	10.4m/42.8	10.9m/36.0	11.4m/34.7			10.0
12.0	44.0	43.0	42.0	41.0	36.0	34.2	31.8	12.5m/29.1	12.0
14.0	36.1	36.0	35.6	34.7	33.9	32.6	30.3	27.9	14.0
16.0	30.0	30.0	29.8	29.6	29.3	28.7	28.3	26.2	16.0
18.0	25.6	25.5	25.3	25.1	25.1	24.9	24.6	24.0	18.0
20.0	22.2	22.1	21.9	21.7	21.7	21.5	21.3	21.1	20.0
22.0	19.5	19.4	19.1	19.0	18.9	18.7	18.6	18.4	22.0
24.0	17.3	17.2	16.9	16.8	16.7	16.5	16.4	16.2	24.0
26.0	15.5	15.3	15.1	15.0	14.9	14.7	14.5	14.3	26.0
28.0	14.0	13.8	13.6	13.5	13.4	13.2	13.0	12.8	28.0
30.0	12.7	12.5	12.3	12.2	12.1	11.9	11.7	11.5	30.0
32.0	11.6	11.4	11.2	11.0	10.9	10.7	10.6	10.3	32.0
34.0	10.6	10.4	10.2	10.1	10.0	9.7	9.6	9.3	34.0
36.0	9.4	9.6	9.3	9.2	9.1	8.9	8.7	8.5	36.0
38.0		8.7	8.6	8.4	8.3	8.1	7.9	7.7	38.0
40.0		38.6m/8.3	7.8	7.8	7.7	7.4	7.3	7.0	40.0
42.0			41.2m/7.2	7.1	7.1	6.8	6.6	6.4	42.0
44.0				43.9m/6.2	6.4	6.3	6.1	5.9	44.0
46.0					5.6	5.7	5.6	5.3	46.0
48.0					46.5m/5.4	5.0	5.0	4.8	48.0
50.0						49.2m/4.5	4.4	4.3	50.0
52.0							51.8m/3.8	3.8	52.0
54.0								3.2	54.0
56.0								54.4m/3.0	56.0
Reeves	5	4	4	4	3	3	3	3	Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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

- Ratings according to Japanese Construction Codes for Mobile Cranes.
- 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 2.0 (t).

## (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 auxiliary sheave hook block, slings, and all other load handling accessories deducted from auxiliary sheave ratings shown.
- Standard boom lengths for auxiliary sheave mounting are 15.2 m to 61.0 m.

## Main hoist loads (Front drum)

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	152	275	412	549	686
Maximum Loads (t)	15.5	28.0	42.0	56.0	70.0

No. of Parts of Line	6	7	8	9
Maximum Loads (kN)	824	961	1,098	1,177
Maximum Loads (t)	84.0	98.0	112.0	120.0

## Auxiliary hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	152
Maximum Loads (t)	15.5

## Main hoist loads (Third drum)

No. of Parts of Line	1*	2	3	4	5
Maximum Loads (kN)	-	235	353	471	588
Maximum Loads (t)	-	24.0	36.0	48.0	60.0

No. of Parts of Line	6	7	8	9	10
Maximum Loads (kN)	706	824	941	1,059	1,177
Maximum Loads (t)	72.0	84.0	96.0	108.0	120.0

## WARNING

- ※ If one part of lines selected, the boom erects and topples down to the back side when the hoisting operation of the hook is performed.

Weight of hook block						
Hook Block	120t	70t Double Hook	70t Single Hook	50t	35t	Ball Hook
Weight (t)	1.80	1.20	0.93	0.85	0.70	0.45

## Assembling the counterweight

53.1 t counterweight

Without carbody weight

No.8	No.9
No.6	No.7
No.4	No.5
No.3	
No.2	
No.1	

Counterweights

Carbody weights

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

# LIFTING CAPACITIES



## Crane Boom Lifting Capacities

Counterweight: 53.1 t  
Without Carbody weight

Unit: metric ton

Load radius (m)	Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m)	Load radius (m)
4.5		120.0									4.5
5.0		120.0	5.1m/112.0	5.6m/98.0							5.0
6.0		110.4	110.1	98.0	6.1m/84.0	6.7m/70.0					6.0
7.0		90.2	90.1	90.0	84.0	70.0	7.2m/70.0	7.7m/56.0			7.0
8.0		72.7	72.6	72.5	72.4	70.0	70.0	56.0	8.2m/56.0		8.0
9.0		60.7	60.6	60.5	60.4	60.3	60.2	56.0	56.0		9.0
10.0		52.1	51.9	51.8	51.7	51.6	51.5	51.4	51.2		10.0
12.0		40.3	40.1	40.0	39.9	39.8	39.6	39.6	39.4		12.0
14.0		32.8	32.6	32.4	32.3	32.1	32.0	31.9	31.7		14.0
16.0		14.9m/29.1	27.3	27.1	27.0	26.8	26.7	26.6	26.4		16.0
18.0			17.5m/24.3	23.2	23.1	22.9	22.7	22.6	22.4		18.0
20.0				20.2	20.1	19.9	19.7	19.6	19.4		20.0
22.0				20.1m/20.1	17.7	17.5	17.3	17.2	17.0		22.0
24.0					22.8m/16.9	15.6	15.4	15.3	15.0		24.0
26.0						25.4m/14.4	13.8	13.7	13.4		26.0
28.0							12.5	12.4	12.1		28.0
30.0								11.2	11.0		30.0
32.0								30.7m/10.9	10.0		32.0
34.0									33.3m/9.4		34.0
Reeves		9	8	7	6	5	5	4	4		Reeves

Load radius (m)	Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom length (m)	Load radius (m)
8.0		8.8m/42.0									8.0
9.0		42.0	9.3m/42.0	9.8m/42.0							9.0
10.0		42.0	42.0	42.0	10.4m/28.0	10.9m/28.0	11.4m/28.0				10.0
12.0		39.4	39.2	39.0	28.0	28.0	28.0	28.0	12.5m/28.0		12.0
14.0		31.7	31.5	31.3	28.0	28.0	28.0	28.0	27.2		14.0
16.0		26.3	26.2	26.0	26.0	25.8	25.6	25.5	25.3		16.0
18.0		22.4	22.2	22.0	22.0	21.8	21.6	21.5	21.3		18.0
20.0		19.3	19.2	19.0	18.9	18.8	18.6	18.4	18.2		20.0
22.0		16.9	16.8	16.5	16.5	16.4	16.2	16.0	15.8		22.0
24.0		15.0	14.8	14.6	14.6	14.4	14.2	14.0	13.8		24.0
26.0		13.4	13.2	13.0	12.9	12.8	12.6	12.4	12.2		26.0
28.0		12.0	11.8	11.6	11.6	11.4	11.2	11.0	10.8		28.0
30.0		10.9	10.7	10.5	10.4	10.2	10.0	9.9	9.6		30.0
32.0		9.9	9.7	9.5	9.4	9.2	9.0	8.9	8.6		32.0
34.0		9.0	8.8	8.6	8.5	8.4	8.1	8.0	7.8		34.0
36.0		8.3	8.1	7.8	7.8	7.6	7.4	7.2	7.0		36.0
38.0			7.4	7.2	7.1	6.9	6.7	6.5	6.3		38.0
40.0			38.6m/7.3	6.6	6.5	6.3	6.1	5.9	5.7		40.0
42.0				41.2m/6.3	6.0	5.8	5.6	5.4	5.1		42.0
44.0					43.9m/5.5	5.3	5.1	4.8	4.5		44.0
46.0						4.9	4.6	4.3	4.0		46.0
48.0						46.5m/4.8	4.1	3.9	3.5		48.0
50.0							49.2m/3.9	3.4	3.1		50.0
52.0								51.8m/3.1	2.7		52.0
54.0									2.4		54.0
56.0									54.4m/2.3		56.0
Reeves		3	3	3	2	2	2	2	2		Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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.

# LIFTING CAPACITIES



## Crane Boom Lifting Capacities (Third Drum)

Counterweight: 53.1 t  
Without Carbody weight

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) \ Load radius (m)
4.5	120.0								4.5
5.0	120.0	5.1m/116.6	5.6m/108.0						5.0
6.0	110.4	110.1	108.0	6.1m/98.9	6.7m/87.6				6.0
7.0	90.3	90.2	90.1	90.0	86.4	7.2m/78.3	7.7m/70.2		7.0
8.0	72.8	72.6	72.5	72.4	72.3	72.2	69.6	8.2m/60.0	8.0
9.0	60.8	60.6	60.5	60.4	60.2	60.2	60.1	60.0	9.0
10.0	52.1	52.0	51.8	51.7	51.5	51.5	51.4	51.3	10.0
12.0	40.4	40.2	40.0	39.9	39.7	39.6	39.5	39.4	12.0
14.0	32.8	32.6	32.4	32.3	32.1	32.0	31.9	31.8	14.0
16.0	14.9m/29.1	27.3	27.1	26.9	26.7	26.7	26.6	26.4	16.0
18.0		17.5m/24.3	23.2	23.0	22.8	22.7	22.6	22.5	18.0
20.0			20.2	20.0	19.8	19.7	19.6	19.4	20.0
22.0			20.1m/20.1	17.7	17.4	17.3	17.2	17.0	22.0
24.0				22.8m/16.9	15.5	15.4	15.3	15.1	24.0
26.0					25.4m/14.4	13.8	13.7	13.5	26.0
28.0						12.5	12.3	12.1	28.0
30.0							11.2	11.0	30.0
32.0							30.7m/10.9	10.0	32.0
34.0								33.3m/9.5	34.0
Reeves	10	10	9	9	8	7	6	5	Reeves

Load radius (m) \ Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	Boom length (m) \ Load radius (m)
8.0	8.8m/57.4								8.0
9.0	57.0	9.3m/48.0	9.8m/46.8						9.0
10.0	51.2	48.0	46.6	10.4m/42.8	10.9m/36.0	11.4m/34.7			10.0
12.0	39.3	39.2	39.0	38.9	36.0	34.2	31.8	12.5m/29.1	12.0
14.0	31.6	31.6	31.4	31.2	31.2	31.0	30.2	27.9	14.0
16.0	26.3	26.2	26.0	25.8	25.8	25.6	25.4	25.3	16.0
18.0	22.3	22.2	22.0	21.9	21.8	21.6	21.5	21.3	18.0
20.0	19.3	19.2	19.0	18.8	18.8	18.6	18.4	18.2	20.0
22.0	16.9	16.8	16.6	16.4	16.4	16.1	16.0	15.8	22.0
24.0	14.9	14.8	14.6	14.5	14.4	14.2	14.0	13.8	24.0
26.0	13.3	13.2	13.0	12.8	12.8	12.6	12.4	12.2	26.0
28.0	12.0	11.9	11.6	11.5	11.4	11.2	11.0	10.8	28.0
30.0	10.8	10.7	10.5	10.3	10.2	10.0	9.9	9.6	30.0
32.0	9.8	9.7	9.5	9.3	9.2	9.0	8.8	8.6	32.0
34.0	9.0	8.9	8.6	8.5	8.4	8.1	8.0	7.7	34.0
36.0	8.3	8.1	7.9	7.7	7.6	7.4	7.2	7.0	36.0
38.0		7.4	7.2	7.0	6.9	6.7	6.5	6.3	38.0
40.0		38.6m/7.3	6.6	6.4	6.3	6.1	5.9	5.7	40.0
42.0			41.2m/6.3	5.9	5.8	5.6	5.4	5.1	42.0
44.0				43.9m/5.5	5.3	5.1	4.8	4.5	44.0
46.0					4.9	4.6	4.3	4.0	46.0
48.0					46.5m/4.8	4.1	3.9	3.5	48.0
50.0						49.2m/3.9	3.5	3.1	50.0
52.0							51.8m/3.1	2.8	52.0
54.0								2.4	54.0
56.0								54.4m/2.3	56.0
Reeves	5	4	4	4	3	3	3	3	Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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

- Ratings according to Japanese Construction Codes for Mobile Cranes.
- 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 2.0 (t).

## (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 auxiliary sheave hook block, slings, and all other load handling accessories deducted from auxiliary sheave ratings shown.
- Standard boom lengths for auxiliary sheave mounting are 15.2 m to 57.9 m.

## Main hoist loads (Front drum)

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	152	275	412	549	686
Maximum Loads (t)	15.5	28.0	42.0	56.0	70.0

No. of Parts of Line	6	7	8	9
Maximum Loads (kN)	824	961	1,098	1,177
Maximum Loads (t)	84.0	98.0	112.0	120.0

## Auxiliary hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	152
Maximum Loads (t)	15.5

## Main hoist loads (Third drum)

No. of Parts of Line	1*	2	3	4	5
Maximum Loads (kN)	-	235	353	471	588
Maximum Loads (t)	-	24.0	36.0	48.0	60.0

No. of Parts of Line	6	7	8	9	10
Maximum Loads (kN)	706	824	941	1,059	1,177
Maximum Loads (t)	72.0	84.0	96.0	108.0	120.0

## WARNING

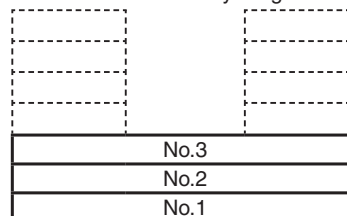
- ※ If one part of lines selected, the boom erects and topples down to the back side when the hoisting operation of the hook is performed.

Weight of hook block						
Hook Block	120t	70t Double Hook	70t Single Hook	50t	35t	Ball Hook
Weight (t)	1.80	1.20	0.93	0.85	0.70	0.45

## Assembling the counterweight

29.1 t counterweight

Without carbody weight



Counterweights

Carbody weights

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



# LIFTING CAPACITIES



## Crane Boom Lifting Capacities

Counterweight: 29.1 t  
Without Carbody weight

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) \ Load radius (m)
4.5	120.0								4.5
5.0	117.5	5.1m/112.0	5.6m/95.0						5.0
6.0	83.5	83.4	83.4	6.1m/78.2	6.7m/67.5				6.0
7.0	62.9	62.9	62.8	62.8	62.7	7.2m/59.5	7.7m/52.5		7.0
8.0	50.5	50.4	50.3	50.2	50.1	50.0	50.0	8.2m/47.3	8.0
9.0	42.0	41.9	41.7	41.7	41.6	41.5	41.4	41.3	9.0
10.0	35.8	35.7	35.5	35.5	35.4	35.2	35.2	35.0	10.0
12.0	27.5	27.3	27.1	27.1	26.9	26.8	26.8	26.6	12.0
14.0	22.1	21.9	21.7	21.7	21.5	21.4	21.3	21.1	14.0
16.0	14.9m/20.5	18.2	18.0	17.9	17.7	17.6	17.5	17.3	16.0
18.0		17.5m/16.2	15.2	15.1	14.9	14.8	14.7	14.5	18.0
20.0			13.1	13.0	12.8	12.6	12.5	12.3	20.0
22.0			20.1m/13.0	11.3	11.1	10.9	10.8	10.6	22.0
24.0				22.8m/10.8	9.7	9.6	9.5	9.2	24.0
26.0					25.4m/8.9	8.5	8.3	8.1	26.0
28.0						7.5	7.4	7.1	28.0
30.0							6.6	6.3	30.0
32.0							30.7m/6.4	5.6	32.0
34.0								33.3m/5.3	34.0
Reeves	9	8	7	6	5	5	4	4	Reeves

Load radius (m) \ Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	Boom length (m) \ Load radius (m)
8.0	8.8m/42.0							8.0
9.0	41.3	9.3m/38.8	9.8m/35.7					9.0
10.0	35.0	34.9	34.7	10.4m/28.0	10.9m/28.0	11.4m/28.0		10.0
12.0	26.5	26.4	26.2	26.2	26.1	25.9	26.2	12.0
14.0	21.1	20.9	20.7	20.7	20.6	20.4	20.3	14.0
16.0	17.3	17.1	16.9	16.9	16.7	16.6	16.4	16.0
18.0	14.4	14.3	14.1	14.1	13.9	13.7	13.6	18.0
20.0	12.3	12.1	11.9	11.9	11.7	11.5	11.4	20.0
22.0	10.6	10.4	10.2	10.2	10.0	9.8	9.6	22.0
24.0	9.2	9.0	8.8	8.8	8.6	8.4	8.2	24.0
26.0	8.0	7.9	7.6	7.6	7.4	7.2	7.1	26.0
28.0	7.1	6.9	6.7	6.6	6.5	6.3	6.1	28.0
30.0	6.2	6.1	5.8	5.8	5.6	5.4	5.3	30.0
32.0	5.5	5.4	5.1	5.1	4.9	4.7	4.5	32.0
34.0	4.9	4.8	4.5	4.5	4.3	4.1	3.9	34.0
36.0	4.4	4.2	4.0	3.9	3.8	3.5	3.3	36.0
38.0		3.8	3.5	3.4	3.2	2.9	2.7	38.0
40.0		38.6m/3.6	3.1	3.0	2.7	2.4	2.2	40.0
42.0			41.2m/2.8	2.5	2.3	2.0		42.0
44.0				43.9m/2.1				44.0
Reeves	3	3	3	2	2	2	2	Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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.





# Crane Boom Lifting Capacities (Third Drum)

Counterweight: 29.1 t  
Without Carbody weight

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	Boom length (m) \ Load radius (m)
4.5	120.0								4.5
5.0	117.5	5.1m/115.1	5.6m/95.0						5.0
6.0	83.5	83.5	83.4	6.1m/78.1	6.7m/67.4				6.0
7.0	63.0	62.9	62.8	62.7	62.6	7.2m/59.5	7.7m/52.4		7.0
8.0	50.6	50.4	50.3	50.2	50.1	50.0	50.0	8.2m/47.4	8.0
9.0	42.1	41.9	41.7	41.6	41.5	41.5	41.4	41.3	9.0
10.0	35.9	35.7	35.6	35.4	35.3	35.2	35.2	35.1	10.0
12.0	27.5	27.3	27.2	27.0	26.9	26.8	26.7	26.6	12.0
14.0	22.2	22.0	21.8	21.6	21.4	21.4	21.3	21.1	14.0
16.0	14.9m/20.6	18.2	18.0	17.8	17.6	17.6	17.5	17.3	16.0
18.0		17.5m/16.2	15.2	15.1	14.9	14.8	14.7	14.5	18.0
20.0			13.1	12.9	12.7	12.6	12.5	12.4	20.0
22.0			20.1m/13.1	11.3	11.0	10.9	10.8	10.6	22.0
24.0				22.8m/10.8	9.7	9.6	9.4	9.3	24.0
26.0					25.4m/8.9	8.4	8.3	8.1	26.0
28.0						7.5	7.4	7.2	28.0
30.0							6.6	6.4	30.0
32.0							30.7m/6.4	5.7	32.0
34.0								33.3m/5.3	34.0
Reeves	10	10	8	7	6	5	5	4	Reeves

Load radius (m) \ Boom length (m)	39.6	42.7	45.7	48.8	51.8	54.9	57.9	Boom length (m) \ Load radius (m)
8.0	8.8m/42.6							8.0
9.0	41.2	9.3m/38.8	9.8m/35.7					9.0
10.0	34.9	34.9	34.7	10.4m/33.0	10.9m/30.0	11.4m/28.1		10.0
12.0	26.5	26.4	26.2	26.1	26.0	25.9	26.2	12.0
14.0	21.0	20.9	20.7	20.6	20.5	20.4	20.2	14.0
16.0	17.2	17.1	16.9	16.8	16.6	16.5	16.4	16.0
18.0	14.4	14.3	14.1	13.9	13.8	13.7	13.5	18.0
20.0	12.2	12.1	11.9	11.8	11.6	11.5	11.4	20.0
22.0	10.5	10.4	10.2	10.0	9.9	9.8	9.6	22.0
24.0	9.1	9.0	8.8	8.6	8.5	8.4	8.2	24.0
26.0	8.0	7.9	7.7	7.5	7.3	7.2	7.1	26.0
28.0	7.0	6.9	6.7	6.5	6.4	6.2	6.1	28.0
30.0	6.2	6.1	5.9	5.7	5.5	5.4	5.2	30.0
32.0	5.5	5.4	5.2	5.0	4.8	4.7	4.5	32.0
34.0	4.9	4.8	4.5	4.4	4.2	4.1	3.9	34.0
36.0	36.0m/4.4	4.2	4.0	3.8	3.7	3.5	3.2	36.0
38.0		3.8	3.5	3.4	3.1	2.9	2.7	38.0
40.0		38.6m/3.7	3.1	2.9	2.6	2.4	2.2	40.0
42.0			41.2m/2.8	2.5	2.2	2.0		42.0
44.0				43.9m/2.1				44.0
Reeves	4	4	3	3	3	3	3	Reeves

Note:

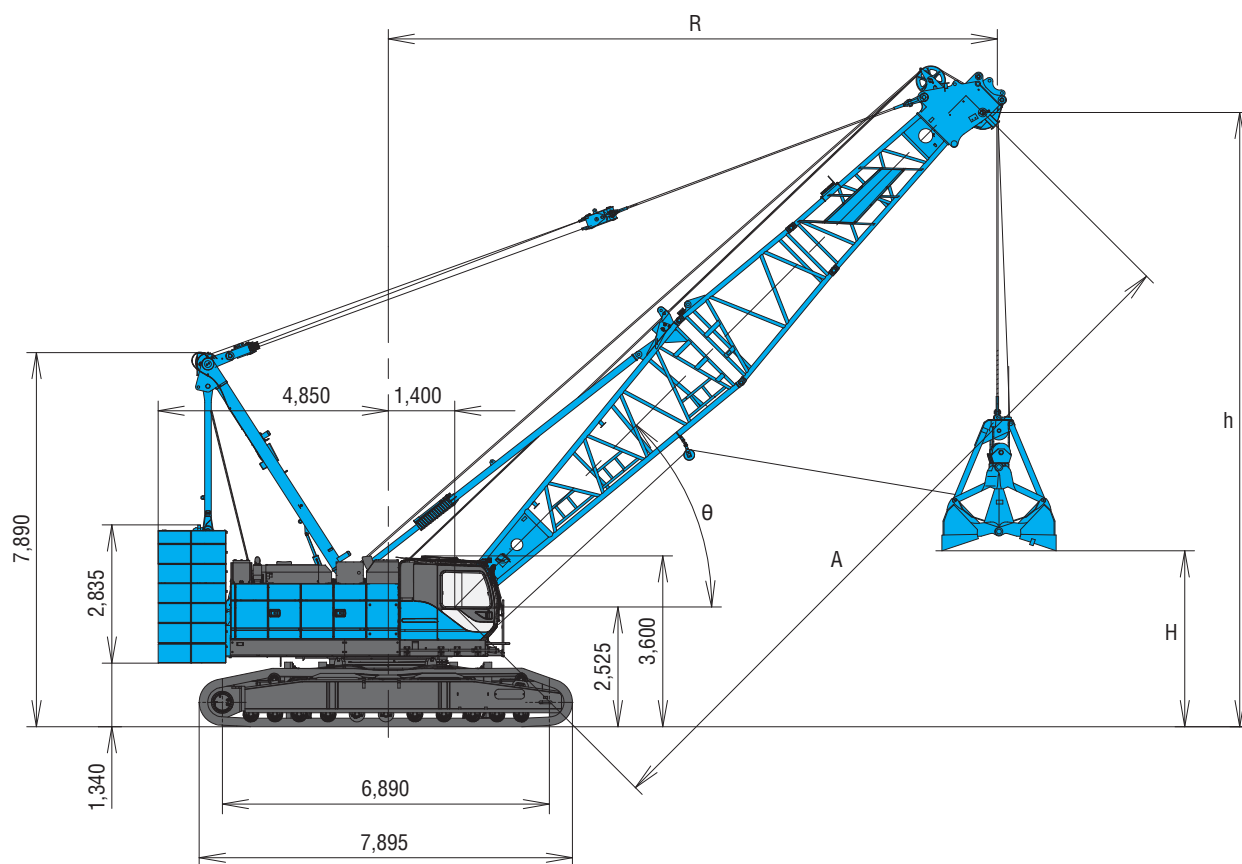
Ratings according to Japanese Construction Codes for Mobile Cranes.

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.

(Unit: mm)



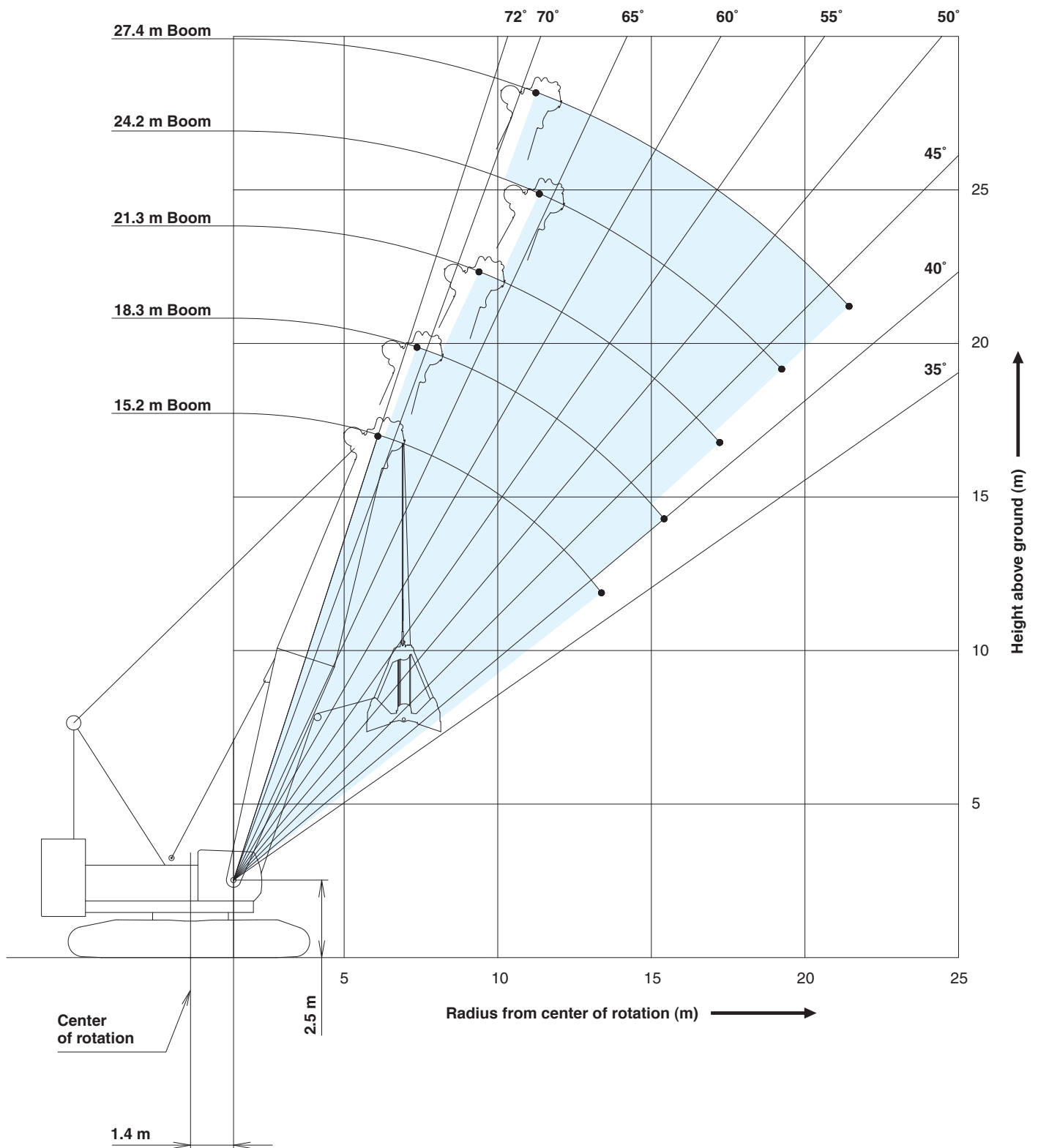
Boom length		m	A	15.2					18.3					21.3				
Boom angle		deg.	$\theta$	38	48	58	66	70	39	48	56	64	70	40	48	55	62	68
Load radius		m	R	14.0	12.0	10.0	8.0	7.0	16.0	14.0	12.0	10.0	8.0	18.0	16.0	14.0	12.0	10.0
Bucket capacity	2.0 m <sup>3</sup>		H	4.6	7.0	8.6	9.7	10.1	7.0	9.2	10.9	12.1	13.0	9.4	11.5	13.2	14.5	15.5
	2.5 m <sup>3</sup>	4.2		6.6	8.2	9.3	9.7	6.6	8.8	10.5	11.7	12.6	9.0	11.1	12.8	14.1	15.1	
	3.0 m <sup>3</sup>	4.0		6.4	8.0	9.1	9.5	6.4	8.6	10.2	11.5	12.4	8.8	10.9	12.6	13.9	14.9	
	4.0 m <sup>3</sup>	3.8		6.2	7.8	8.9	9.3	6.2	8.4	10.0	11.3	12.2	8.6	10.7	12.4	13.7	14.7	
Boom point height		m	h	13.3	15.6	17.2	18.5	19.0	13.3	15.6	17.2	18.5	19.0	15.7	17.9	19.5	20.8	21.8
Rated load		t	12.5															

Boom length		m	A	24.4					27.4					
Boom angle		deg.	$\theta$	42	48	54	60	65	42	48	54	59	64	68
Load radius		m	R	20.0	18.0	16.0	14.0	12.0	22.0	20.0	18.0	16.0	14.0	12.0
Bucket capacity	2.0 m <sup>3</sup>		H	11.8	13.9	15.5	16.8	17.9	14.1	16.1	17.8	19.2	20.4	21.3
	2.5 m <sup>3</sup>			11.4	13.5	15.1	16.4	17.5	13.7	15.7	17.4	18.8	20.0	20.9
	3.0 m <sup>3</sup>			11.2	13.3	14.9	16.2	17.3	13.5	15.5	17.2	18.6	19.8	20.7
	4.0 m <sup>3</sup>			11.0	13.1	14.7	16.0	17.1	13.3	15.3	17.0	18.4	19.6	20.5
Boom point height		m	h	18.1	20.2	21.8	23.2	24.3	20.4	22.5	24.1	25.5	26.6	27.5
Rated load		t		12.5					10.0					

# WORKING RANGE FOR CLAMSHELL

## Clamshell Working Range

Unit: m



- 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.  
 $\text{bucket capacity (m}^3\text{)} \times \text{specified gravity of material (t/m}^3\text{)} + \text{bucket weight (t)} = \text{rated load}.$
- 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)	123
Maximum Loads (t)	12.5

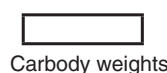
## Assembling the counterweight

59.1 t counterweight

10.8 t carbody weight

No.10	No.11
No.8	No.9
No.6	No.7
No.4	No.5
No.3	
No.2	
No.1	

Counterweights



Carbody weights

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

# LIFTING CAPACITIES FOR CLAMSHELL



## Clamshell Bucket Specification

Bucket capacity (m³)	Bucket height when opened (m)
2.0	3.9
2.5	4.3
3.0	4.5
4.0	4.7



## Clamshell Rating Charts Crane Boom Capacities

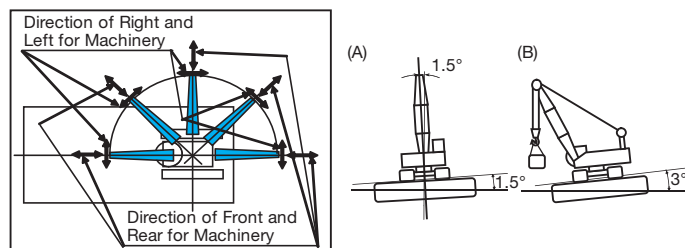
Counterweight: 59.1 t  
Carbody weight: 10.8 t

Unit: metric ton

Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	Boom length (m) \ Load radius (m)
7.0	12.5					7.0
8.0	12.5	12.5				8.0
9.0	12.5	12.5				9.0
10.0	12.5	12.5	12.5			10.0
12.0	12.5	12.5	12.5	12.5	10.0	12.0
14.0	12.5	12.5	12.5	12.5	10.0	14.0
16.0		12.5	12.5	12.5	10.0	16.0
18.0			12.5	12.5	10.0	18.0
20.0				12.5	10.0	20.0
22.0					10.0	22.0
Reeves	1	1	1	1	1	Reeves

# SUPPLEMENTAL DATA FOR BARGE

- 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 machine  
Maximum inclination shall be within 3.0 degrees



- Working area shall be inshore and smooth water.
- Applicable regulations for structure
- Japanese construction codes for mobile 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 (t).
- The machinery should be fastened to the deck of the barge to prevent tip over and sliding.
- 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.

## (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 auxiliary sheave hook block, slings, and all other load handling accessories deducted from auxiliary sheave ratings shown.

## Main hoist loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (kN)	123	245	368	490	613
Maximum Loads (t)	12.5	25.0	37.5	50.0	62.5

No. of Parts of Line	6	7
Maximum Loads (kN)	735	785
Maximum Loads (t)	75.0	80.0

## Auxiliary hoist loads

No. of Parts of Line	1
Maximum Loads (kN)	132
Maximum Loads (t)	13.5

## Main hoist loads (Third drum)

No. of Parts of Line	1*	2	3	4	5
Maximum Loads (kN)	-	216	324	431	539
Maximum Loads (t)	-	22.0	33.0	44.0	55.0

No. of Parts of Line	6	7	8
Maximum Loads (kN)	647	755	785
Maximum Loads (t)	66.0	77.0	80.0

## WARNING

- ※ If one part of lines selected, the boom erects and topples down to the back side when the hoisting operation of the hook is performed.

Weight of hook block						
Hook Block	120t	70t Double Hook	70t Single Hook	50t	35t	Ball Hook
Weight (t)	1.80	1.20	0.93	0.85	0.70	0.45

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

- Counterweight shall be reduced to 53.1 ton, and carbody weight shall be removed.

	On barge	On ground (Full C/W)
Boom length	15.2 m to 42.7 m	15.2 m to 61.0 m
Counterweight	53.1 t	59.1 t
Carbody weight	None (Removed)	10.8 t

## Assembling the counterweight


53.1 ton counterweight  
Without carbody weight

No.8	No.9
No.6	No.7
No.4	No.5
No.3	
No.2	
No.1	

Counterweights

Carbody weights

# LIFTING CAPACITIES FOR BARGE

<div><div></div><div><div>Barge Rating Charts</div><div>Crane Boom Lifting Capacities</div></div></div>												Counterweight: 53.1 t Without Carbody weight	
Unit: metric ton													
Load radius (m)	Boom length (m)	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	42.7	Boom length (m)	Load radius (m)
5.0	5.3m/80.0												5.0
6.0	68.9	66.6	6.7m/62.8										6.0
7.0	60.5	60.2	59.9	7.4m/56.4									7.0
8.0	52.5	52.2	51.9	51.7	8.1m/51.0	8.7m/46.5							8.0
9.0	46.3	46.1	45.8	45.6	45.3	45.2	9.4m/41.4						9.0
10.0	41.4	41.1	40.8	40.7	40.4	40.2	40.1	10.1m/37.3	10.8m/33.3	11.5m/29.2			10.0
12.0	34.0	33.7	33.4	33.2	33.0	32.8	32.7	32.4	32.0	28.8			12.0
14.0	24.8	28.2	28.2	28.0	27.7	27.5	27.3	27.1	26.9	26.8			14.0
16.0	14.9m/21.1	22.4	23.6	24.0	23.7	23.6	23.4	23.1	22.9	22.8			16.0
18.0		17.5m/17.5	19.2	20.0	20.5	20.5	20.3	20.1	19.9	19.7			18.0
20.0			14.9	16.5	17.0	18.0	17.6	17.4	17.3	17.2			20.0
22.0			20.1m/14.6	13.8	14.3	15.1	15.5	15.2	15.1	15.0			22.0
24.0				22.8m/12.3	12.0	12.9	13.6	13.5	13.4	13.2			24.0
26.0					25.4m/10.3	11.0	11.7	12.0	11.9	11.8			26.0
28.0						9.3	10.1	10.5	10.7	10.6			28.0
30.0							8.6	9.2	9.6	9.5			30.0
32.0							30.7m/8.2	8.0	8.4	8.6			32.0
34.0								33.3m/7.2	7.3	7.7			34.0
36.0									6.4	6.7			36.0
38.0										6.0			38.0
40.0										38.6m/5.7			40.0
Reeves	7	6	6	5	5	4	4	3	3	3			Reeves


Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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.

<div><div></div><div><div>Barge Rating Charts</div><div>Crane Boom Lifting Capacities (Third Drum)</div></div></div> <div>Counterweight: 53.1 t Without Carbody weight Unit: metric ton</div>													
<div>Load radius (m)</div>	<div>Boom length (m)</div>	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	42.7	<div>Boom length (m)</div>	<div>Load radius (m)</div>
5.0	5.3m/80.0												5.0
6.0	68.9	66.6	6.7m/62.8										6.0
7.0	60.5	60.2	59.9	7.4m/56.4									7.0
8.0	52.5	52.2	51.9	51.7	8.1m/51.0	8.7m/46.5							8.0
9.0	46.3	46.1	45.8	45.6	45.3	45.2	9.4m/41.4						9.0
10.0	41.4	41.1	40.8	40.7	40.4	40.2	40.1	10.1m/37.3	10.8m/33.3	11.5m/29.2			10.0
12.0	34.0	33.7	33.4	33.2	33.0	32.8	32.7	32.4	32.0	28.8			12.0
14.0	24.8	28.2	28.2	28.0	27.7	27.5	27.3	27.1	26.9	26.8			14.0
16.0	14.9m/21.1	22.4	23.6	24.0	23.7	23.6	23.4	23.1	22.9	22.8			16.0
18.0		17.5m/17.5	19.2	20.0	20.5	20.5	20.3	20.1	19.9	19.7			18.0
20.0			14.9	16.5	17.0	18.0	17.6	17.4	17.3	17.2			20.0
22.0			20.1m/14.6	13.8	14.3	15.1	15.5	15.2	15.1	15.0			22.0
24.0				22.8m/12.3	12.0	12.9	13.6	13.5	13.4	13.2			24.0
26.0					25.4m/10.3	11.0	11.7	12.0	11.9	11.8			26.0
28.0						9.3	10.1	10.5	10.7	10.6			28.0
30.0							8.6	9.2	9.6	9.5			30.0
32.0							30.7m/8.2	8.0	8.4	8.6			32.0
34.0								33.3m/7.2	7.3	7.7			34.0
36.0									6.4	6.7			36.0
38.0										6.0			38.0
40.0										38.6m/5.7			40.0
Reeves	8	7	6	6	5	5	4	4	4	3			Reeves

Note:



Ratings according to Japanese Construction Codes for Mobile Cranes.

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.

# LIFTING CAPACITIES FOR BARGE

<div>   <b>Barge for Clamshell Rating Charts</b> </div> <div> <b>Crane Boom Lifting Capacities</b> </div> <div> <b>Counterweight: 53.1 t</b>  <b>Without Carbody weight</b>  Unit: metric ton </div>						
Load radius (m) \ Boom length (m)	15.2	18.3	21.3	24.4	27.4	Boom length (m) \ Load radius (m)
8.0	12.5					8.0
9.0	12.5	12.5				9.0
10.0	12.5	12.5	12.5			10.0
12.0	12.5	12.5	12.5	11.5	9.0	12.0
14.0	12.5	12.5	12.5	11.5	9.0	14.0
16.0		12.5	12.5	11.5	9.0	16.0
18.0			12.5	11.5	9.0	18.0
20.0				11.5	9.0	20.0
22.0					9.0	22.0
Reeves	1	1	1	1	1	Reeves

Note:

Ratings according to Japanese Construction Codes for Mobile Cranes.

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

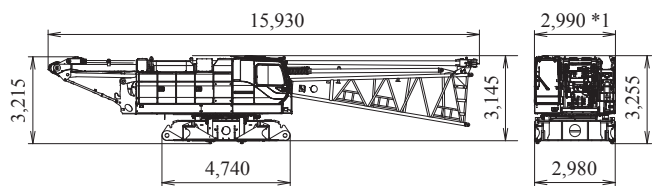
Name	Dimension (mm)	Weight (kg)
<b>Base machine</b> <ul style="list-style-type: none"> <li>• Boom base</li> <li>• Gantry</li> <li>• Crane backstop (Strong type)</li> <li>• Wire rope (Front / rear / third boom hoist)</li> <li>• Without crawler</li> <li>• Without side steps</li> </ul>		37,800
<b>Base machine</b> <ul style="list-style-type: none"> <li>• Gantry</li> <li>• Wire rope (Front / rear / third boom hoist)</li> <li>• Without crawler (Third drum : 1,900 kg)</li> <li>• Without side steps</li> </ul>		33,500
<b>Base machine</b> <ul style="list-style-type: none"> <li>• Without gantry</li> <li>• Without wire rope (Front / rear / third drum)</li> <li>• Without translifter</li> <li>• Without crawler (Third drum : 1,900 kg)</li> <li>• Without side steps</li> </ul>		27,400
Crawler		14,500

\*1 With the side step on cabin side : 3,170  
With the side steps on the both side : 3,340

# PARTS AND ATTACHMENTS

## Base Machine

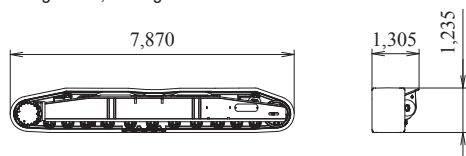
Boom base, Gantry, Crane backstop (Strong type),  
Wire rope (Front/rear/third boom hoist), Without crawler, Without side steps  
Weight: 37,800 kg Width: 2,980 mm



\*1 With the side step on cabin side: 3,170  
With the side steps on the both side: 3,340

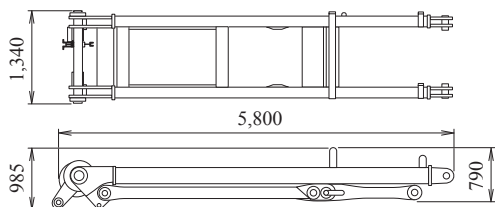
## Crawler

Weight: 14,500 kg



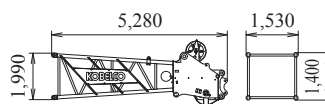
## Gantry

Weight: 2,200 kg



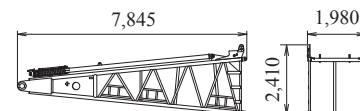
## Boom Tip (for Crane)

Weight: 2,120 kg



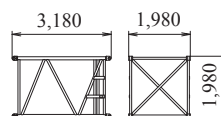
## Boom Base (with Backstop (Strong type))

Weight: 3,100 kg



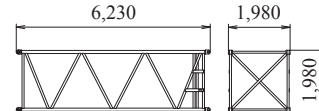
## 3.0 m Boom Insert

Weight: 530 kg



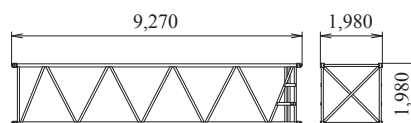
## 6.1 m Boom Insert

Weight: 850 kg



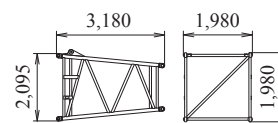
## 9.1 m Boom Insert

Weight: 1,160 kg



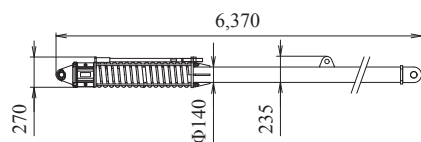
## Taper Boom Insert

Weight: 490 kg



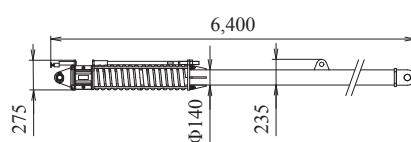
## Crane backstop (Strong type) (Right side)

Weight: 450 kg / 1 piece



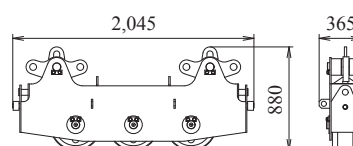
## Crane backstop (Strong type) (Left side)

Weight: 450 kg / 1 piece



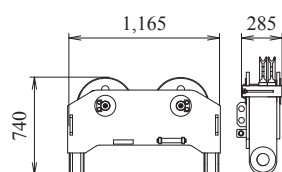
## Upper Spreader

Weight: 485 kg



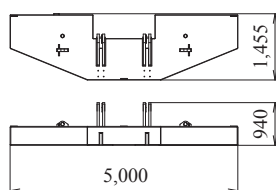
## Lower Spreader

Weight: 300 kg



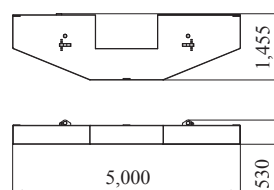
## Counterweight (1)

Weight: 9,800 kg



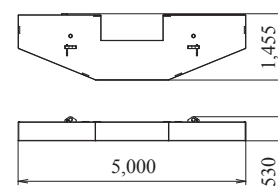
## Counterweight (2)

Weight: 9,610 kg



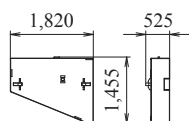
## Counterweight (3)

Weight: 9,700 kg



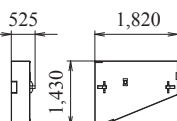
## Counterweight (L) (4) (6) (8)

Weight: 4,000 kg



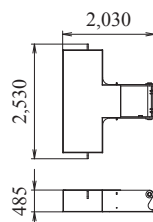
## Counterweight (R) (5) (7) (9)

Weight: 4,000 kg



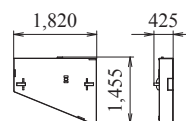
## Carbody weight

Weight: 5,400 kg × 2



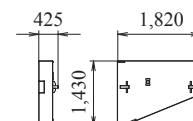
## Counterweight (L) (10)

Weight: 3,000 kg

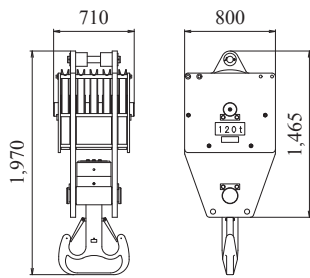


## Counterweight (R) (11)

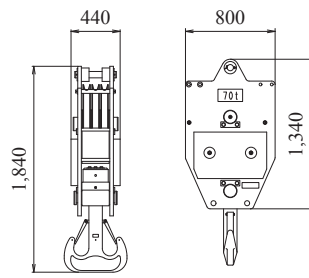
Weight: 3,000 kg



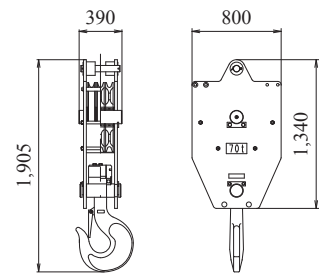
**120 t Hook (For Wire rope dia. 30 mm)**  
Weight: 1,760 kg



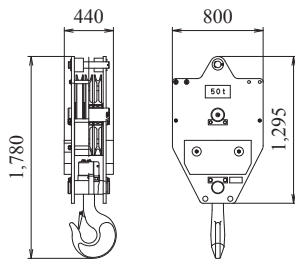
**70 t Hook (Double hook) (For Wire rope dia. 30 mm)**  
Weight: 1,200 kg



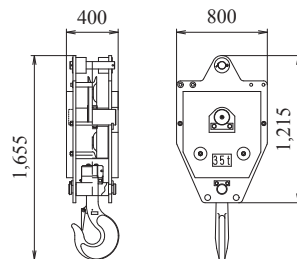
**70 t Hook (Single hook) (For Wire rope dia. 30 mm)**  
Weight: 930 kg



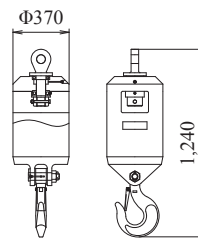
**50 t Hook  
(For Wire rope dia. 30 mm)**  
Weight: 850 kg



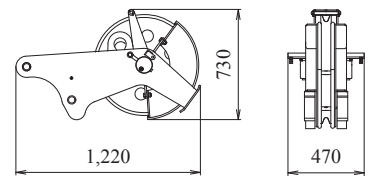
**35 t Hook  
(For Wire rope dia. 30 mm)**  
Weight: 700 kg




**Ball Hook  
(For Wire rope dia. 30 mm)**  
Weight: 450 kg



**Aux. sheave  
(For Wire rope dia. 30 mm)**  
Weight: 290 kg



Note: Estimated weights may vary  $\pm 2\%$ .



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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## **KOBELCO CRANES CO., LTD.**

17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN

Tel: +81-3-5789-2130 Fax: +81-3-5789-3372

URL: <http://www.kobelco-cranes.com/>

Inquiries To: