Telescopic Crawler Crane

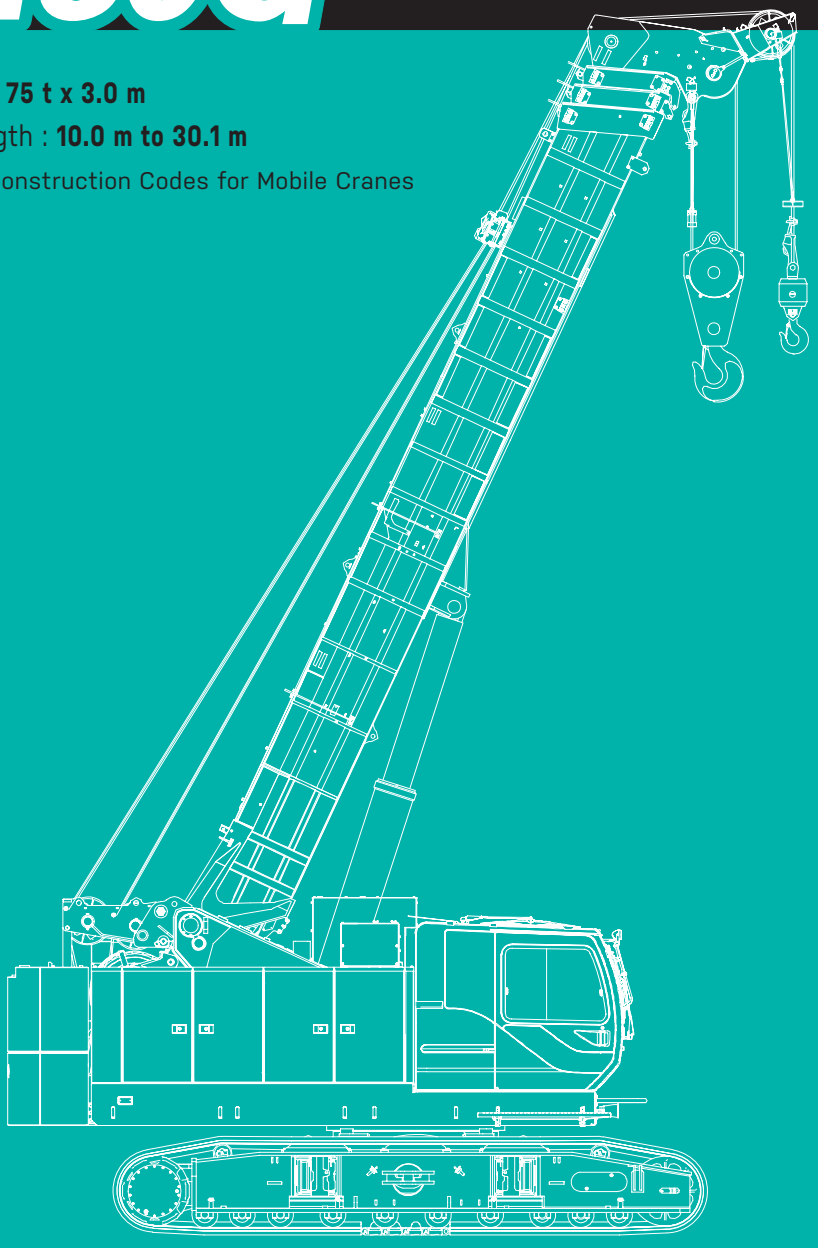
TK750G

Model : TK750G

Max. Lifting Capacity : **75 t x 3.0 m**

Telescopic Boom Length : **10.0 m to 30.1 m**

Comply with Japanese Construction Codes for Mobile Cranes



KOBELCO

TK750G CONTENTS

SPECIFICATIONS

Power Plant

Model: Daimler OM936LA (MTU 6R1000)
Type: Water cooled 4 cycle, 6 cylinder, direct injection diesel with turbocharger, intercooler
Complies with NRMM (Europe) Stage IV and US EPA Tier 4 Final
Displacement: 7.697 L
Rated power: 254 kW/2,000 min^{-1}
Max. torque: 1,245 N·m/1,400 min^{-1}
Cooling system: Water-cooled
Starter: 24 V-3.9 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: Replaceable paper element
Batteries: Two 12 V x 136 Ah/5 HR capacity batteries, series connected
Fuel tank capacity: 400 L
AdBlue tank capacity: 40 L

Hydraulic System

Main pumps: 4-pumps (2 variable plunger pumps + 2 gear pumps) + 4-pumps (2 variable plunger pumps + 2 gear 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 (free): 27.4 MPa
Swing system (brake): 24.5 MPa
Control system: 6.6 MPa
2nd/3rd boom telescope (extend): 20.6 MPa
2nd/3rd boom telescope (retract): 20.6 MPa
Top boom telescope (extend): 16.7 MPa
Top boom telescope (retract): 20.6 MPa
Boom hoist (lower): 9.5 MPa
Boom hoist (raise): 27.4 MPa
Oil Quantity (at the reference level): 791 L

Load Hoisting System

Hydraulic motor drive with spur gear reduction with auto-brake, independent 2 winches, with free-fall function, third winch
Negative brake: A spring-set, hydraulically released multiple-disk brake is mounted on the hoist motor and operated through a counter-balance valve. (Positive free fall brake is standard)
Drum lock: External ratchet for locking drum
Drums:
Main drum: 550 mm P.C.D x 545 mm wide drum, grooved for 22 mm wire rope. Rope capacity is 170 m working length and 335 m storage length.
Aux. drum: 550 mm P.C.D x 545 mm wide drum, grooved for 22 mm wire rope. Rope capacity is 75 m working length and 335 m storage length.
Third drum (Option): 550 mm P.C.D x 542 mm wide drum, grooved for 22 mm wire rope. Rope capacity is 170 m working length and 335 m storage length.
Diameter of wire rope
Main winch: 22 mm x 170 m
Aux. winch: 22 mm x 75 m
Third winch: 22 mm x 170 m
Line speed*:
Hoisting / lowering: 123.3 to 42.3 m/min
Line pull:
Max. line pull*: 153.1 kN {15.6 tf}
(Referential performance)
Rated line pull: 68.7 kN {7.0 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-disk 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: 2.5 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: 17.2 ton

Cab & Control

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

Lower Structure

Steel-welded carbody with axles. Crawler assemblies can be hydraulically extended for wide-track operation or retracted for transportation. Crawler belt tension is maintained by hydraulic jack force on the track-adjusting bearing block.
Crawler drive: Independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic

motor propelling a driving tumbler through a planetary gear box. Hydraulic motor and gear box are built into the crawler side frame within the shoe width.

Crawler brakes: Spring-set, hydraulically released parking brakes are built into each propel drive.

Steering mechanism: A hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite directions).

Track rollers: Sealed track rollers for maintenance-free operation.

Shoe (flat): 800 mm wide each crawler

Max. gradeability: 40%

Weight

Including upper and lower machine, 17.2 ton counterweight, boom, hook, and other accessories.

Weight: 70.6 ton

Ground pressure: 83.9 kPa

Attachment

Boom:

Four section, box construction, 2nd and 3rd simultaneously telescoping, 4th independently telescoping.

Boom length

	Min. Length	Max. Length
Telescopic Boom	10.0 m	30.1 m

Main Specifications (Model: TK750G)

Crane Performance		
Max. Rated Load	10.0 m boom	75.0 t x 3.0 m (11-lines)
	16.7 m boom	36.0 t x 4.5 m (6-lines)
	23.4 m boom	29.0 t x 6.0 m (5-lines)
	30.1 m boom	18.5 t x 8.0 m (4-lines)
	Aux. sheave (Max.)	7.0 t (1-line)
Main Boom Length		10.0 m to 30.1 m
Main Hook Max. Height		30.4 m
Main Hook Max. Operating Radius		27.8 m
Winch (Main / Aux. / Third*1)		
Max. Line Speed (1st layer)		120 m/min
Rated Line Pull (Single line)		68.7 kN {7.0 tf}
Max. Line Pull (Referential performance)		153.1 kN {15.6 tf}
Wire Rope Diameter		22 mm
Wire Rope Length		170 m (Main), 75 m (Aux.), 170 m (Third *1)
Brake Type (Free fall)		Wet-type multiple disc brake
Working Speed		
Swing Speed		2.5 min^{-1}{rpm}
Travel Speed		1.7 / 1.2 (high / low select) km/h
Boom Telescoping Speed		125 / 20.1 sec/m
Boom Raising Speed		64 sec / 0 to 83 degree

Power Plant	
Model	Daimler OM936LA (MTU 6R1000)
Engine Output	254 kW / 2,000 min^{-1}
Fuel Tank	400 L
AdBlue Tank	40 L
Hydraulic System	
Main Pumps	4 pumps (2 variable plunger pumps + 2 gear pumps) + 4 pumps (2 variable plunger pumps + 2 gear pumps)
Max. Pressure	31.9 MPa {325 kgf/cm^2}
Oil Quantity (at the reference level)	791 L
Self-Removal Device	
	Counterweight / Crawler (Option)
Weight	
Operating Weight	70.6 t
Ground Pressure	83.9 kPa {0.86 kgf/cm^2}
Counterweight	17,200 kg
Transport Weight	27,400 kg (30,100 kg *2)

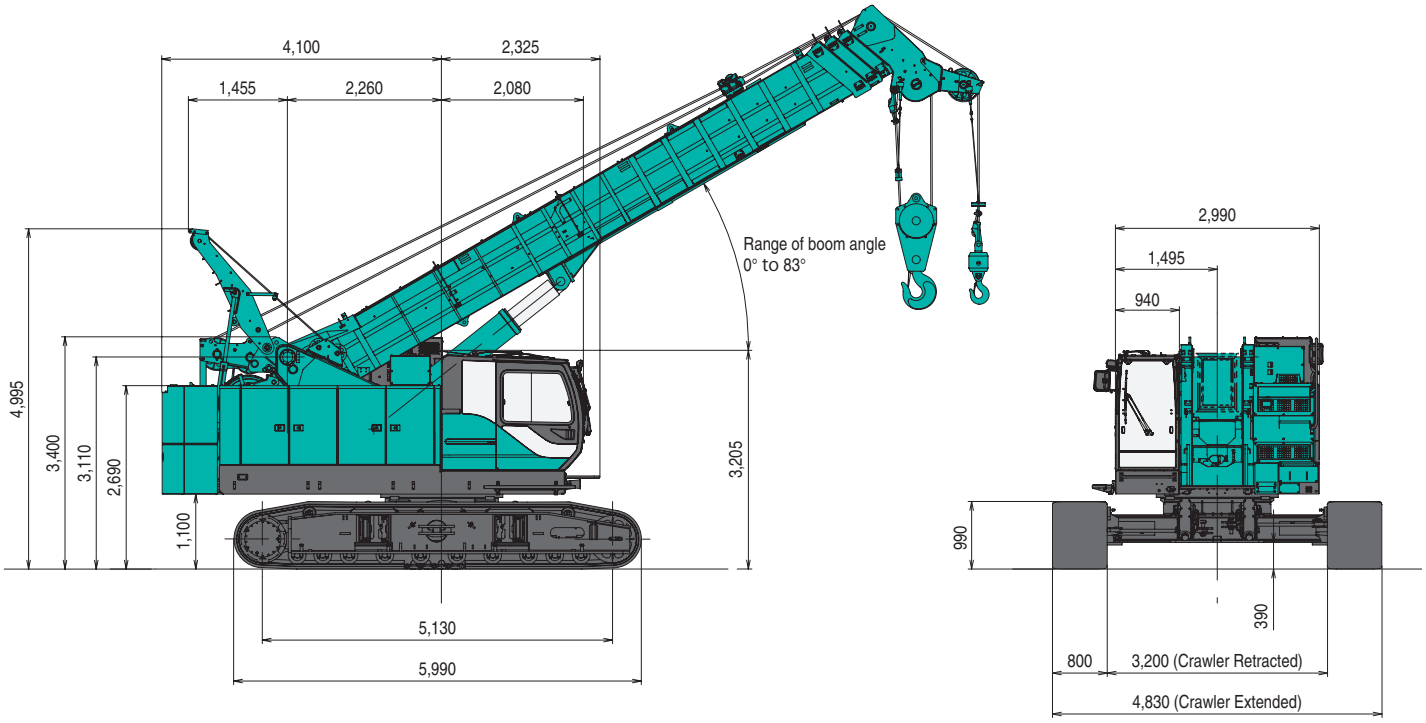
*1 Third winch is optional

*2 With optional parts and attachments

Without Third Drum

Counterweight Self-Removal Device Extended

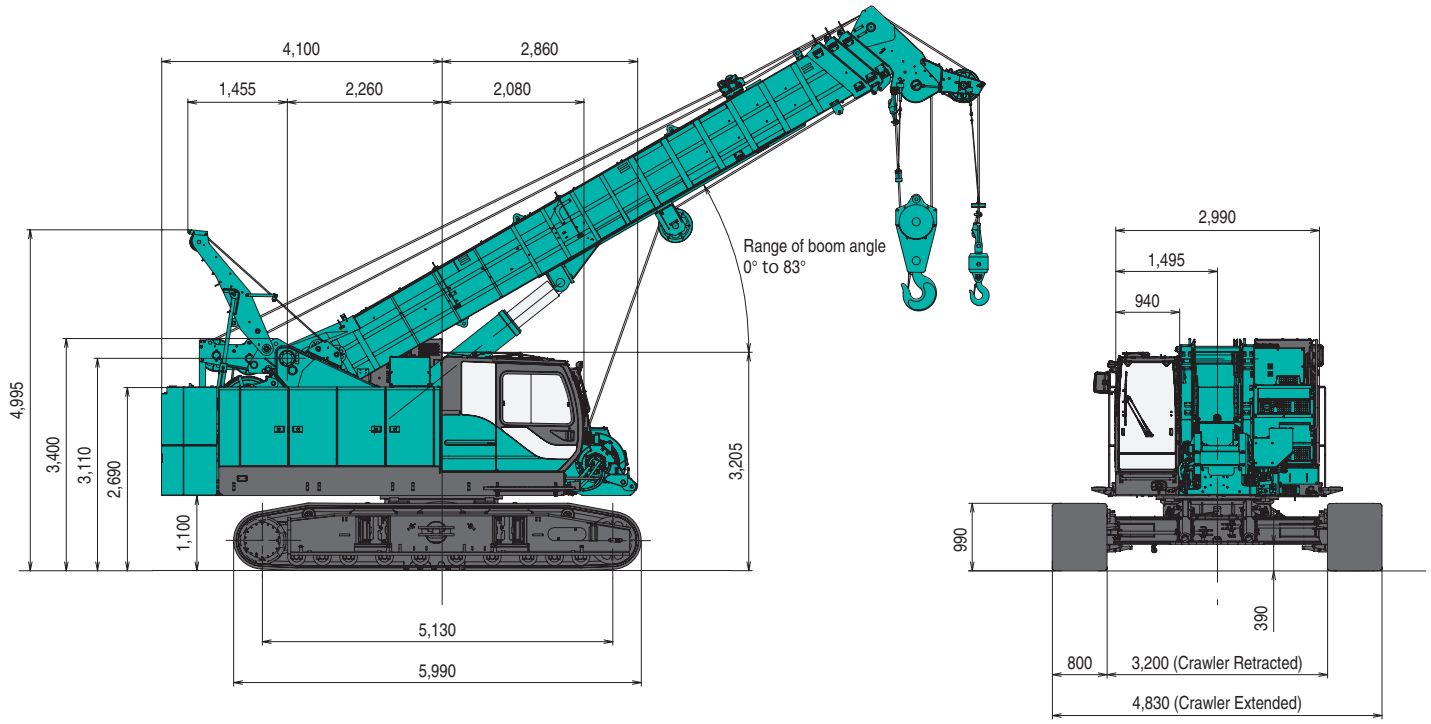
(Unit: mm)



With Third Drum (Option)

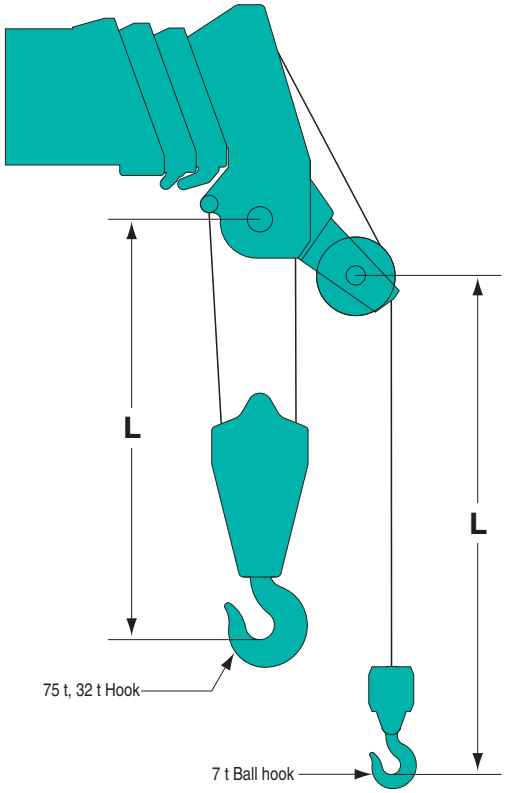
Counterweight Self-Removal Device Extended

(Unit: mm)

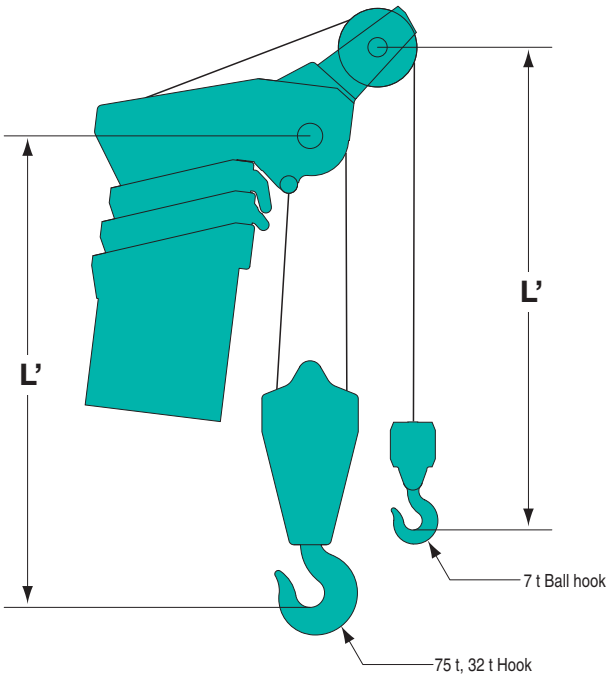


Limit of Hook Lifting

Boom Horizontal



Boom at Maximum Angle



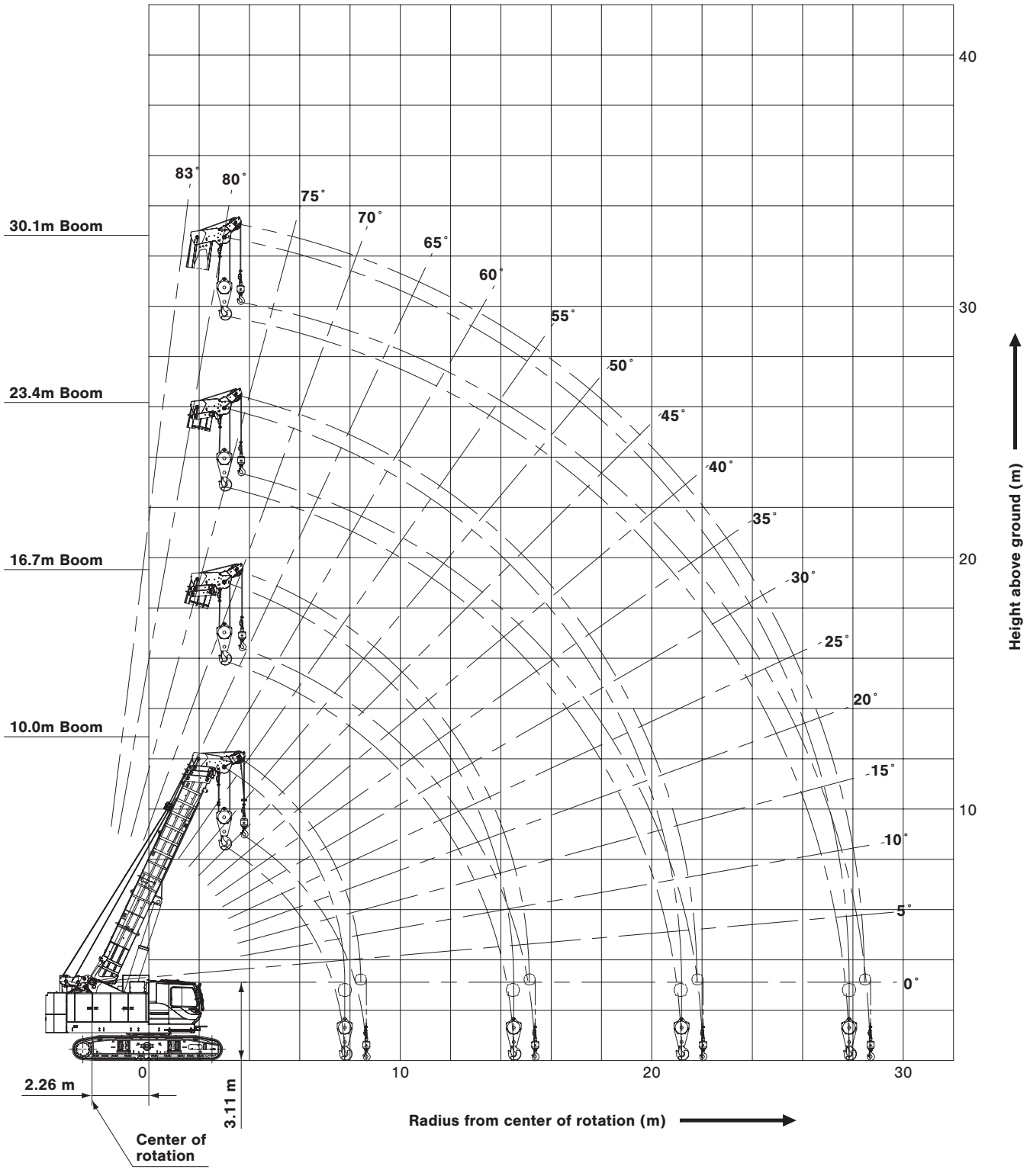
Single Sheave Type Auxiliary Sheave

Hook	L	L'
75 t	2,618 mm	2,937 mm
32 t	2,378 mm	2,687 mm
7 t Ball hook	3,108 mm	3,005 mm

Double Sheave Type Auxiliary Sheave (Option)

Hook	L	L'
75 t	2,618 mm	2,937 mm
32 t	2,378 mm	2,687 mm
7 t Ball hook	3,095 mm	2,992 mm

WORKING RANGES



SUPPLEMENTAL DATA

1. Ratings according to Japanese construction codes for mobile cranes.
   The crane rated loads are including the weight of hooks and other lifting gears.
   Values marked with ▭ are decided according to strength of the machine.
   Other values are decided according to stability of the machine.

Type of hook	75 t	32 t	7 t	7 t Lightweight type (Option)
Weight	800 kg	500 kg	160 kg	60 kg

⚠ CAUTION

When uses of the lightweight hook (option), it may not be lowered depending on the boom length, boom angle and/or the hook height.
In case of the hook is not lowered, add the suitable weights adjusted up to the weight of the ball hook.

2. Even when it is intended to lift a crane rated load, the operator shall be responsible for ensuring safety depending on the actual condition such as reducing of the load and reduction of a working speed, if applicable conditions such as the influence of wind, ground condition, working speed and others are likely to cause safety problems.

3. A working radius shall mean a horizontal distance from the center line of center of rotation of the crane to the center of gravity of the load to be lifted.
   The working radius is based on an actual value with the factor of defection of the boom taken into considerations.
   Thus, be sure to conduct the crane work while referencing the working radius.

4. Be sure to keep the crawler frame extended up to the specified position during execution of the crane work.

5. The crane rated loads of aux. sheaves are as follows.
   In the case of the boom length of 10.0 to 16.7 m, the crane rated load shall be equal to a value with the weight of the 75 t hook (800 kg) subtracted from the careen rated load of the boom and in the case of the max. boom length exceeding 16.7 m, the rated crane load shall be equal to a value with the weight of the 32 t hook (500 kg) subtracted from the rated crane load of the boom, and the limit shall be 7,000 kg.

6. As to the crane rated loads of third drum, the crane rated loads of the boom applies, but the limit shall be (a single part of line) 7,000 kg.

7. When the boom length is in excess of the specified value, conduct the crane work under a rated crane load of the boom of the specified length or a boom of one stage above, whichever is smaller.

8. Where no value is given in the columns of the crane rated loads chart, no execution of work is allowed.
   (If the boom should be inclined to an angle smaller than the minimum boom angle, be fully careful, since the basic machine may overturn with no load.)

9. The minimum number of parts line of the main hook in the main winch lifting is decided within a range not to exceed the value of 7,000 kg per single wire rope.
   The standard numbers of parts line by boom length are as shown below.

Boom length : m	10.0	16.7	23.4	30.1
Hook : t	75		32	
Number of parts line	11	6	5	4

10. The minimum number of part lines of the main hook in the third drum winch lifting is decided within a range not to exceed the value of 7,000 kg per single wire rope.
    The standard numbers of parts line by boom length are as shown below.

Boom length : m	10.0	16.7	23.4	30.1
Hook : t	75		32	
Number of parts line	6	6	4	4

11. To prevent a load being lifted and carried from falling due to wrong operation or others, do not perform a free fall work in the crane work.

Rated Crane Load Table

Counterweight: 17.2 t

(Unit: metric ton)

Working radius (m) \ Boom length (m)	10.0	16.7	23.4	30.1	Boom length (m) \ Working radius (m)
3.0	75.0	36.0	29.0	18.5	**3.0**
3.5	60.0	36.0	29.0	18.5	**3.5**
3.7	56.0	36.0	29.0	18.5	**3.7**
4.0	51.0	36.0	29.0	18.5	**4.0**
4.5	44.5	36.0	29.0	18.5	**4.5**
5.0	39.5	35.0	29.0	18.5	**5.0**
5.5	36.0	33.0	29.0	18.5	**5.5**
6.0	34.4	30.7	29.0	18.5	**6.0**
6.5	31.4	29.8	26.1	18.5	**6.5**
7.0	28.9	27.2	23.2	18.5	**7.0**
7.5	25.9	25.1	21.6	18.5	**7.5**
7.7	24.9	24.4	20.9	18.5	**7.7**
8.0		23.0	20.0	18.5	**8.0**
8.5		21.0	19.0	17.0	**8.5**
9.0		19.2	18.1	15.5	**9.0**
9.5		17.6	17.0	14.5	**9.5**
10.0		16.3	16.1	13.5	**10.0**
11.0		14.0	13.8	12.8	**11.0**
12.0		12.2	12.0	11.8	**12.0**
13.0		10.8	10.5	11.0	**13.0**
14.0		9.6	9.3	9.9	**14.0**
14.4		9.1	8.9	9.4	**14.4**
15.0			8.3	8.8	**15.0**
16.0			7.4	8.0	**16.0**
17.0			6.6	7.2	**17.0**
18.0			6.0	6.5	**18.0**
19.0			5.4	5.9	**19.0**
20.0			4.9	5.4	**20.0**
21.0			4.5	4.9	**21.0**
21.1			4.4	4.9	**21.1**
22.0				4.5	**22.0**
23.0				4.1	**23.0**
24.0				3.8	**24.0**
25.0				3.5	**25.0**
26.0				3.2	**26.0**
27.0				2.9	**27.0**
27.8				2.7	**27.8**
Max. boom angle	65°	76°	80°	82°	**Max. boom angle**
Min. boom angle	0°	0°	0°	0°	**Min. boom angle**

Note:

Ratings shown in [ ] are determined by the strength of the boom or other structural components.

Rated Crane Load Table

Counterweight: 8.2 t (Option)
Special type boom rated load

(Unit: metric ton)

Working radius (m) \ Boom length (m)	10.0	16.7	23.4	30.1	Boom length (m) \ Working radius (m)
3.0	75.0	36.0	29.0	18.5	3.0
3.5	60.0	36.0	29.0	18.5	3.5
3.7	56.0	36.0	29.0	18.5	3.7
4.0	51.0	36.0	29.0	18.5	4.0
4.5	44.5	36.0	29.0	18.5	4.5
5.0	37.2	35.0	29.0	18.5	5.0
5.5	31.3	30.9	29.0	18.5	5.5
6.0	26.9	26.5	26.3	18.5	6.0
6.5	23.5	23.1	22.9	18.5	6.5
7.0	20.8	20.4	20.1	18.5	7.0
7.5	18.6	18.1	17.9	18.5	7.5
7.7	17.8	17.4	17.2	18.5	7.7
8.0		16.3	16.1	16.8	8.0
8.5		14.8	14.5	15.2	8.5
9.0		13.4	13.2	13.8	9.0
9.5		12.3	12.0	12.7	9.5
10.0		11.2	11.0	11.7	10.0
11.0		9.6	9.3	10.0	11.0
12.0		8.2	8.0	8.6	12.0
13.0		7.1	6.9	7.5	13.0
14.0		6.2	6.0	6.6	14.0
14.4		5.9	5.7	6.2	14.4
15.0			5.2	5.8	15.0
16.0			4.6	5.1	16.0
17.0			4.0	4.5	17.0
18.0			3.5	4.0	18.0
19.0			3.0	3.6	19.0
20.0			2.6	3.2	20.0
21.0			2.2	2.8	21.0
21.1			2.1	2.7	21.1
22.0				2.4	22.0
23.0				2.1	23.0
24.0				1.8	24.0
25.0				1.5	25.0
26.0				1.3	26.0
Max. boom angle	65°	76°	80°	82°	Max. boom angle
Min. boom angle	0°	0°	0°	22°	Min. boom angle

Note:
Ratings shown in [ ] are determined by the strength of the boom or other structural components.

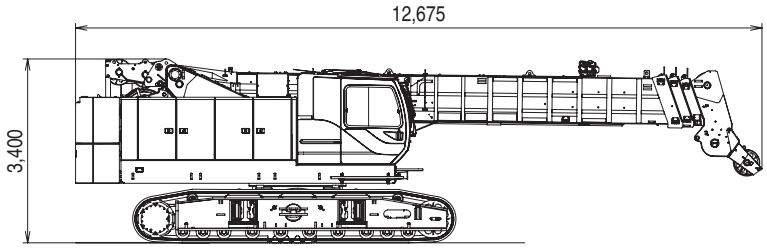
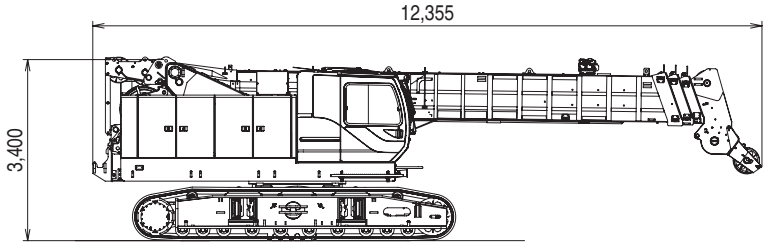
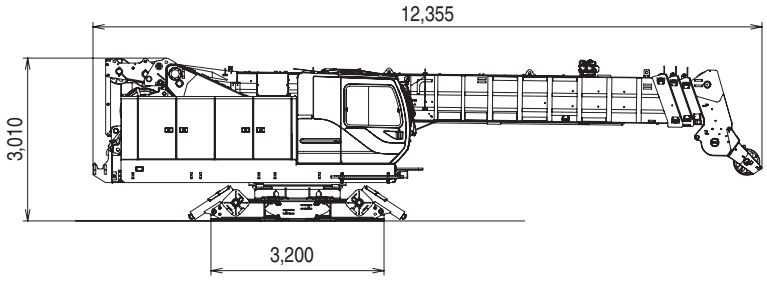
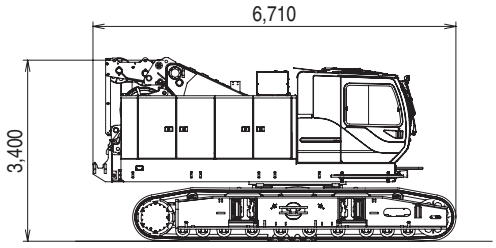
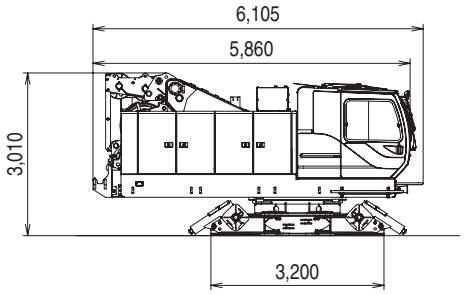
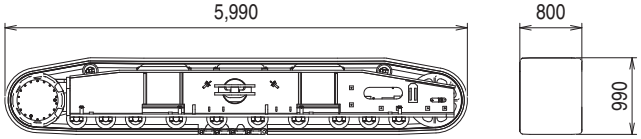
Rated Crane Load Table

Without Counterweight (Option)
Special type boom rated load

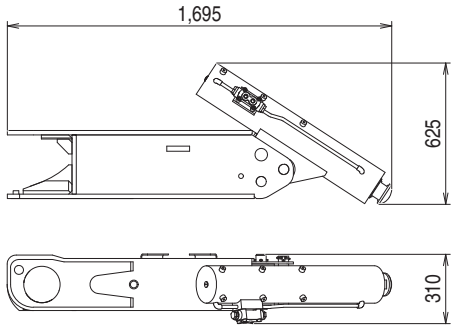
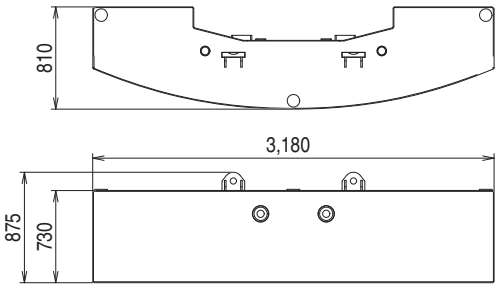
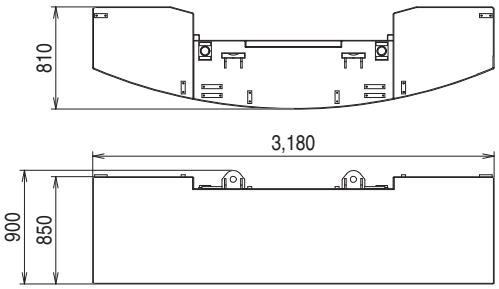
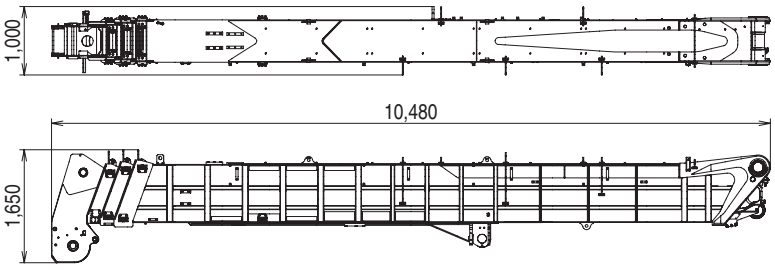
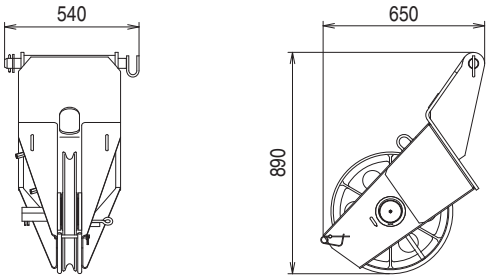
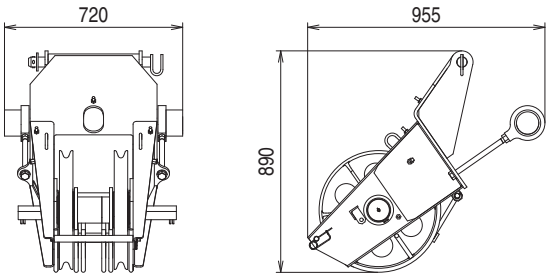
(Unit: metric ton)

Working radius (m) \ Boom length (m)	10.0	16.7	Boom length (m) \ Working radius (m)
3.0	30.0	20.0	3.0
3.5	30.0	20.0	3.5
3.7	30.0	20.0	3.7
4.0	30.0	20.0	4.0
4.5	30.0	20.0	4.5
5.0	24.5	20.0	5.0
5.5	20.5	20.0	5.5
6.0	17.5	17.1	6.0
6.5	15.1	14.8	6.5
7.0	13.3	12.9	7.0
7.5	11.8	11.4	7.5
7.7	11.2	10.8	7.7
8.0		10.1	8.0
8.5		9.1	8.5
9.0		8.1	9.0
9.5		7.4	9.5
10.0		6.7	10.0
11.0		5.5	11.0
12.0		4.6	12.0
13.0		3.9	13.0
14.0		3.3	14.0
14.4		3.1	14.4
Max. boom angle	65°	76°	Max. boom angle
Min. boom angle	0°	0°	Min. boom angle

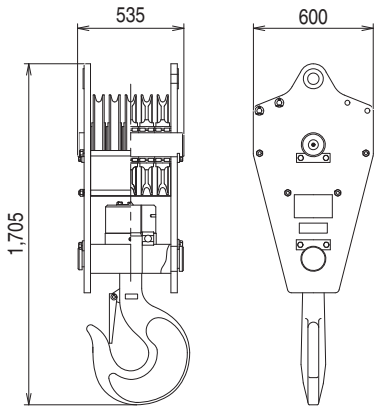
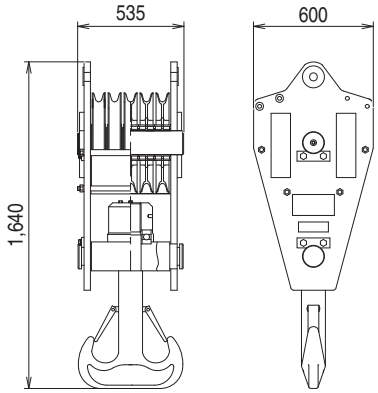
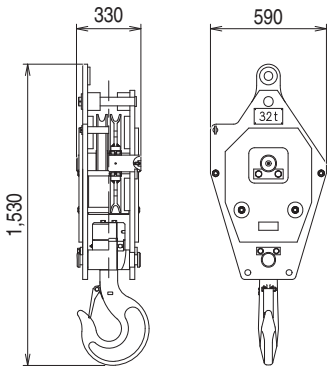
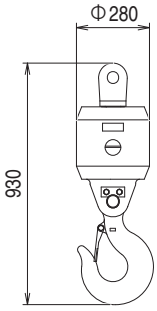
TRANSPORTATION PLAN

Name	Dimension (mm)	Weight (kg)
Base Machine with counterweight		69,600
Base Machine without counterweight		52,400
Base Machine without counterweight and crawler		37,400
Base Machine without counterweight and boom		42,700
Base Machine without counterweight, crawler and boom	 Weight of boom raise cylinder is contained	27,400
Crawler		7,500

PARTS AND ATTACHMENTS

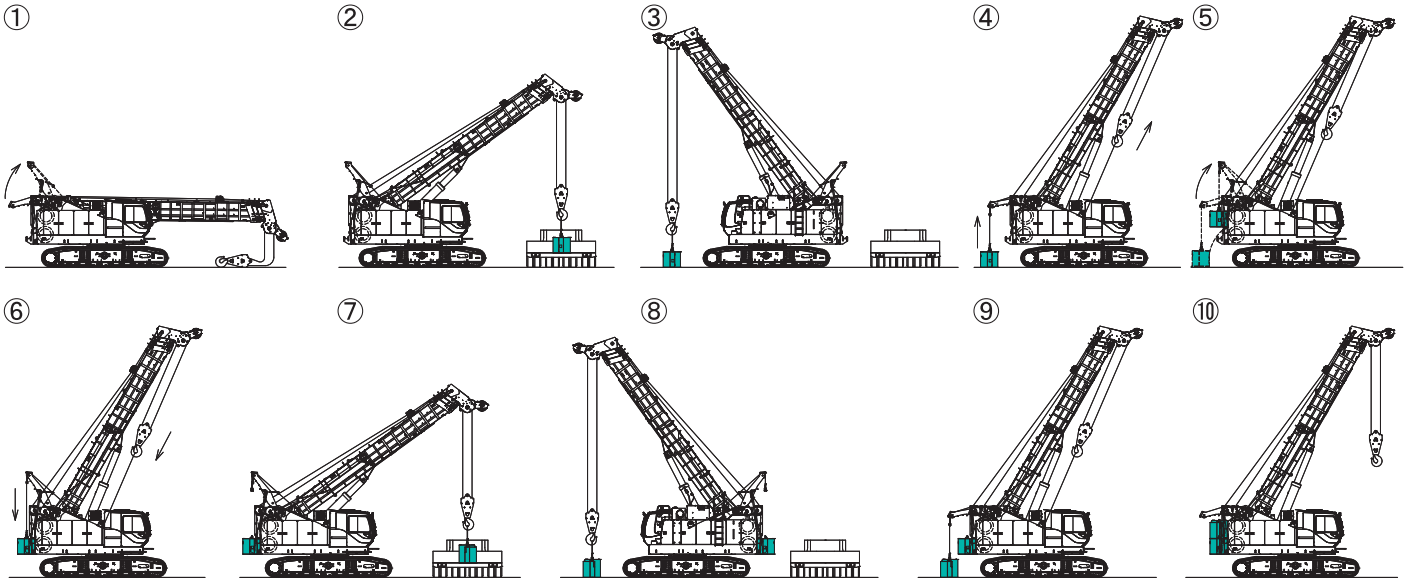
Name	Dimension (mm)	Weight (kg)
Translifter		345
Counterweight (1)		8,200
Counterweight (2)		9,000
Boom Assy		9,710
Single Sheave Type Auxiliary Sheave		115
Double Sheave Type Auxiliary Sheave (Option)		225

PARTS AND ATTACHMENTS

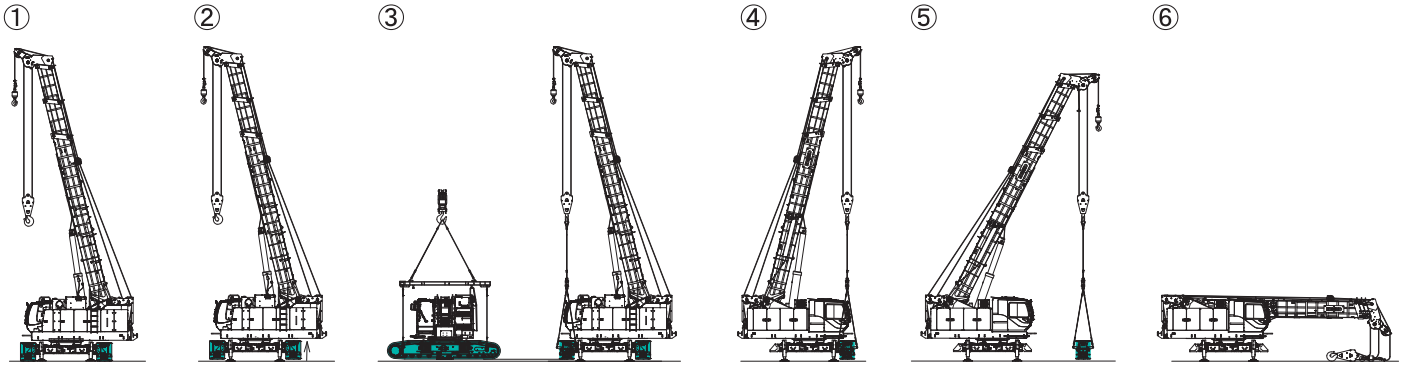
Name	Dimension (mm)	Weight (kg)
75 t Hook (Single Hook)		800
75 t Hook (Double Hook) (Option)		800
32 t Hook (Single Hook)		500
7 t Ball Hook		160

SELF-REMOVAL DEVICE

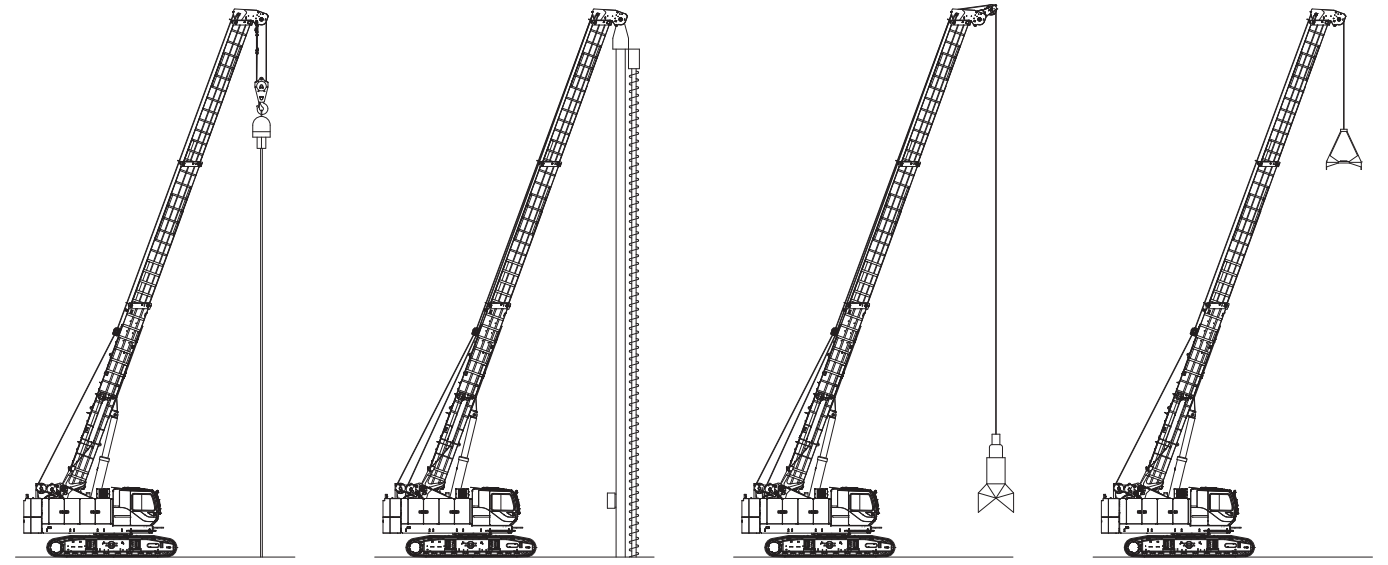
Counterweight (Option)



Crawler (Option)



Recommended Attachments



Vibro-hammer

Auger attachments
Electric type under 44.5kN/m
Hydraulic type under 57.0kN/m

Hammer-grab
1,500dia.

Clamshell
Total weight under 5.5 metric tons (2way)

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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