

Telescopic Crawler Crane

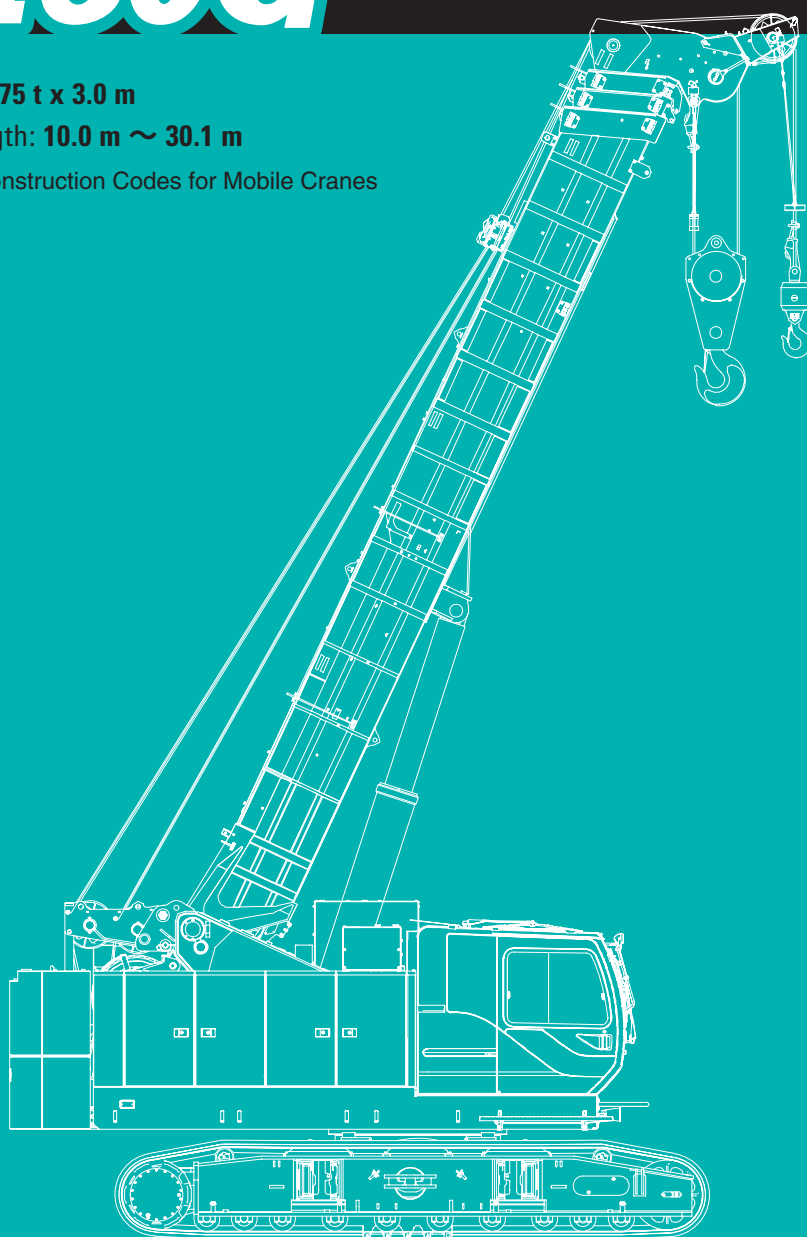
TK750G

Model : TK750G

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

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

Comply with Japanese Construction Codes for Mobile Cranes



KOBELCO



TK750G CONTENTS

3

SPECIFICATIONS

5

GENERAL DIMENSIONS

7

WORKING RANGES

8

SUPPLEMENTAL DATA

9

LIFTING CAPACITIES

11

TRANSPORTATION PLAN

12

PARTS AND ATTACHMENTS

14

SELF-REMOVAL DEVICE

SPECIFICATIONS



Power Plant

Model: Daimler OM936LA (MTU 6R1000)

Type: Water cooled 4 cycle, 6cycls, direct injection diesel with turbocharger, intercooler

Complies with NRMM (Europe) Stage IV and US EPA Tier 4 Final

Displacement: 7,697 liters

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 liters

AdBlue tank capacity: 40 liters



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): 27.4 MPa

Boom hoist (raiser): 9.5 MPa

Hydraulic tank capacity: 860 liters



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 ~ 30.1 m	
Main Hook Max. Height	30.4 m	
Main Hook Max. Operating Radius	27.8 m	
Winch (Main / Aux. / Third*)		
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 *)	
Brake Type (Free fall)	Wet-type multiple disc brake (Standard)	
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 / 0-83 degree	

Power Plant	
Model	Daimler OM936LA (MTU 6R1000)
Engine Output	254 kW / 2,000 min ⁻¹
Fuel Tank	400 liters
AdBlue Tank	40 liters
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 }
Hydraulic Tank Capacity	860 liters
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 *)

*1 Third winch is optional

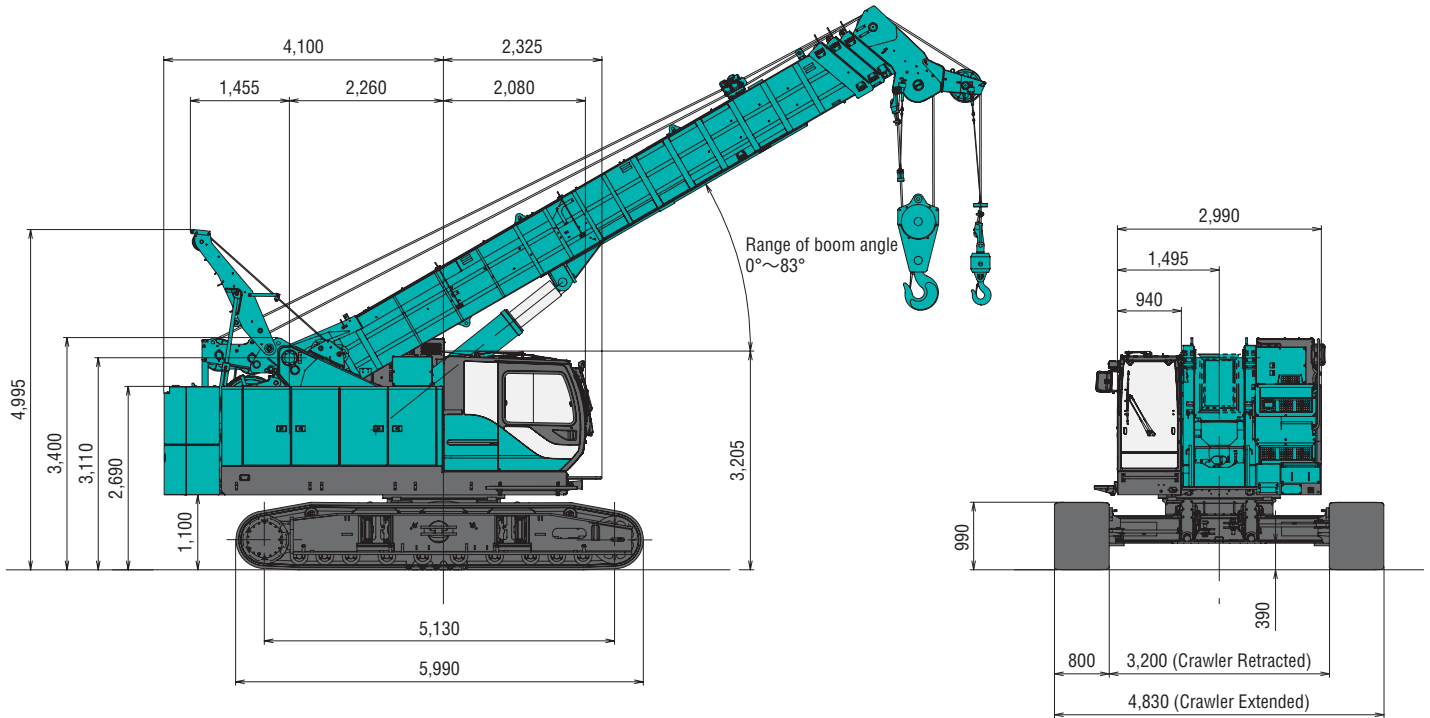
*2 With optional parts and attachments

GENERAL DIMENSIONS

Without Third Drum

Counterweight Self-Removal Device Extended

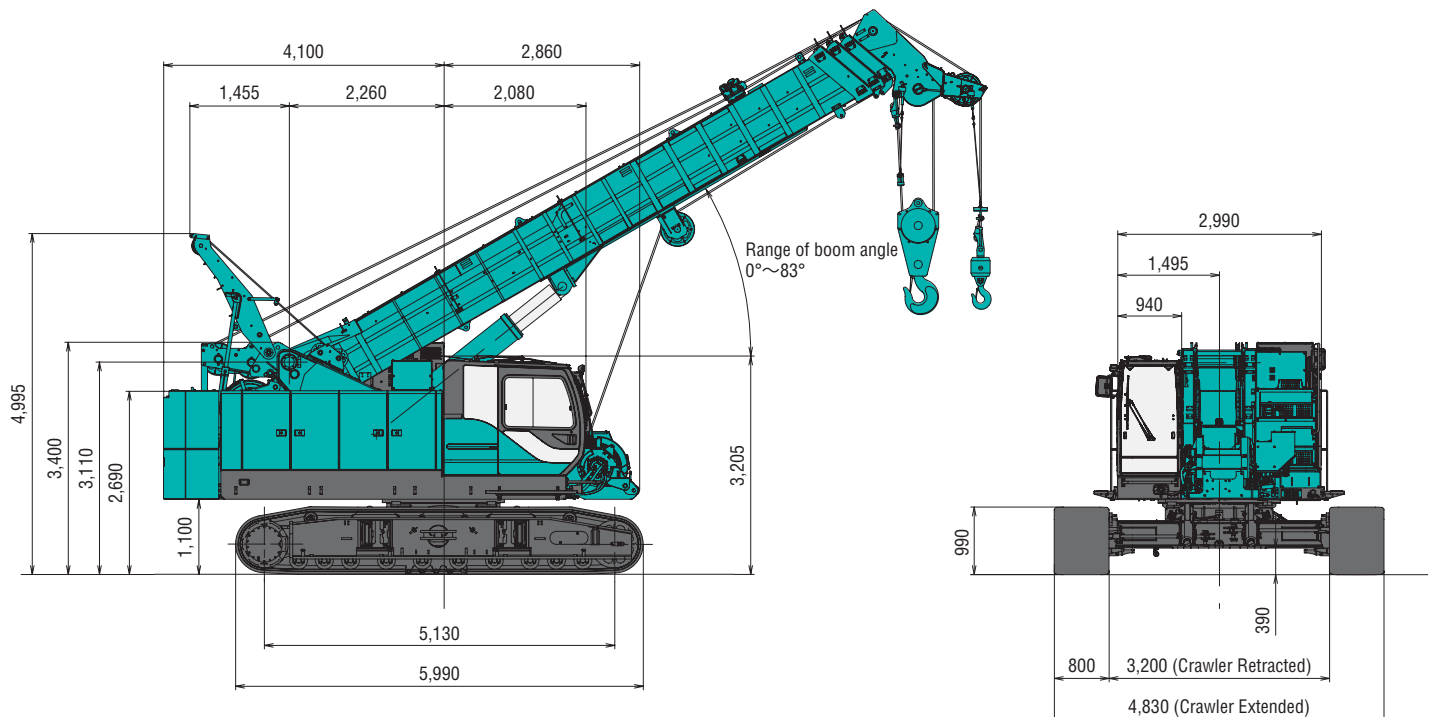
(Unit: mm)



With Third Drum (Option)

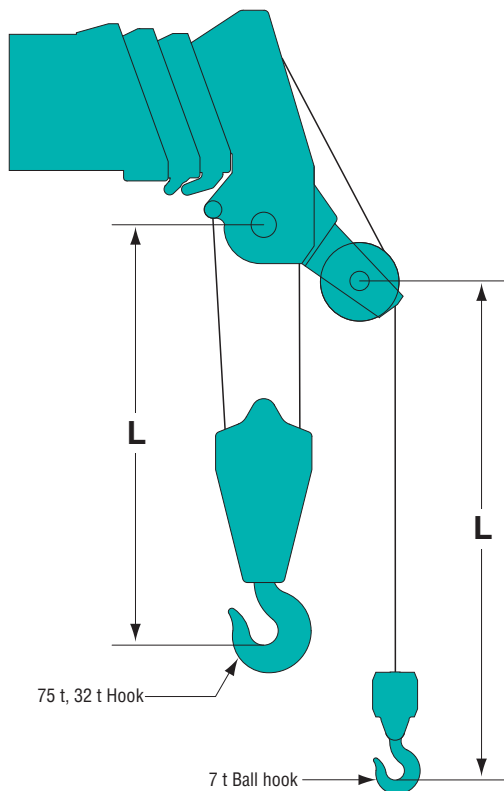
Counterweight Self-Removal Device Extended

(Unit: mm)

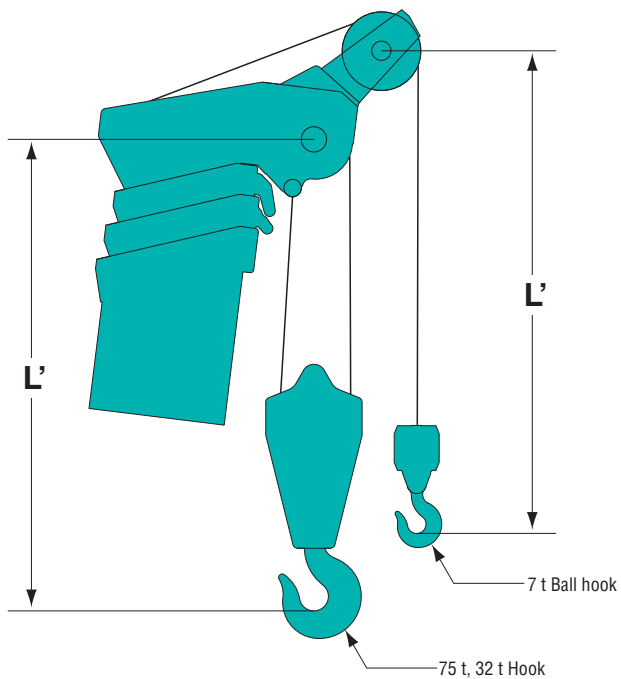


Limit of Hook Lifting

Boom Horizontal



Boom at Maximum Angle



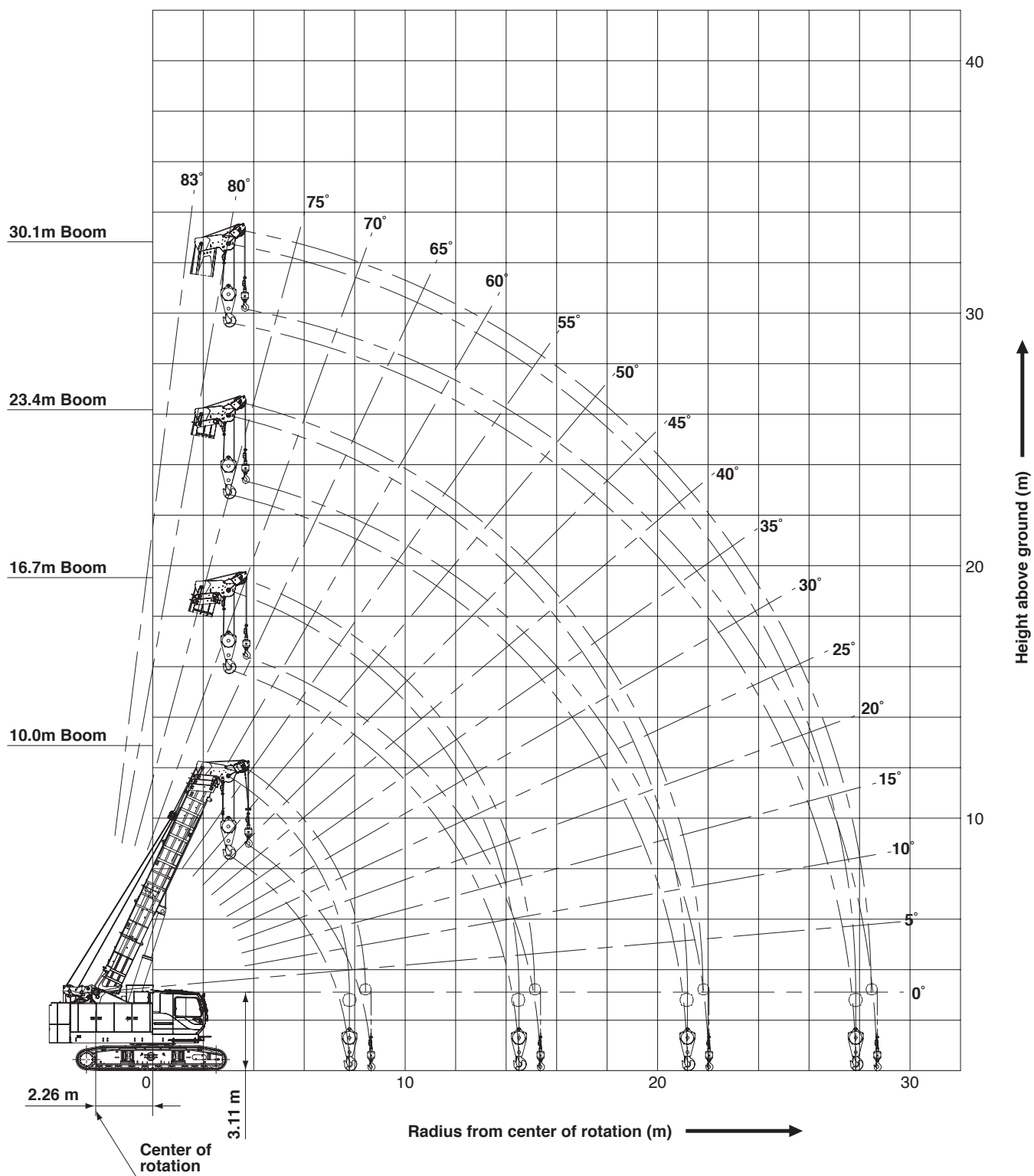
Single Sheave Type Auxiliary Sheave

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



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 deflection 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 crane 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.

LIFTING CAPACITIES



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)					Working radius (m)
		10.0	16.7	23.4	30.1	
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.



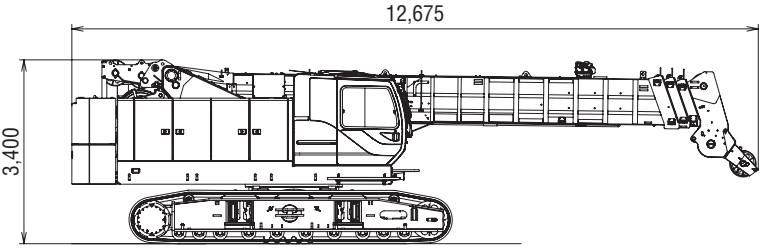
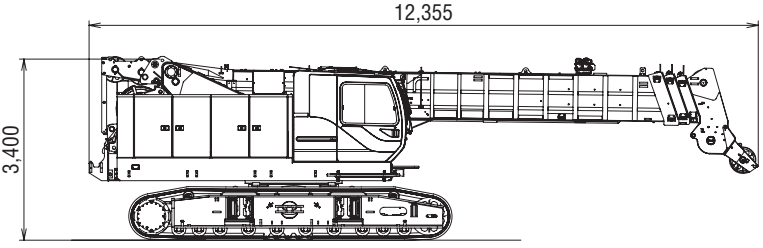
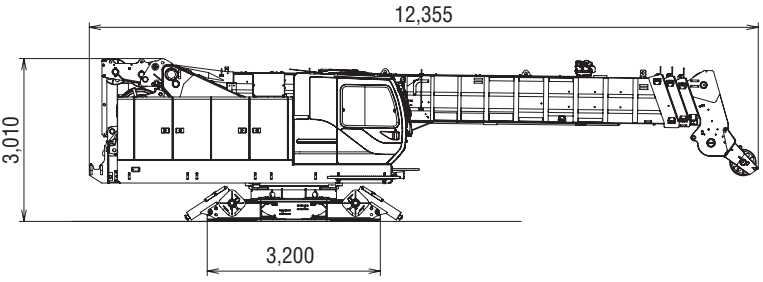
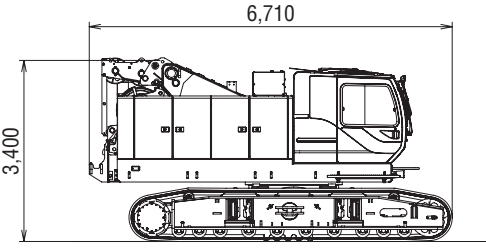
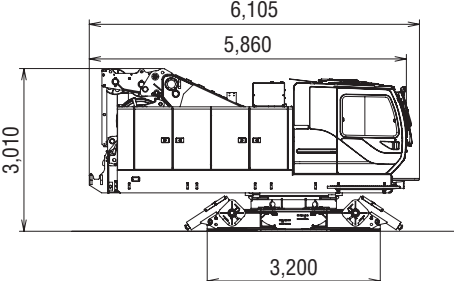
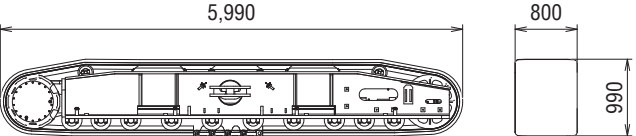
Rated Crane Load Table

Without Counterweight (Option)
Special type boom rated load

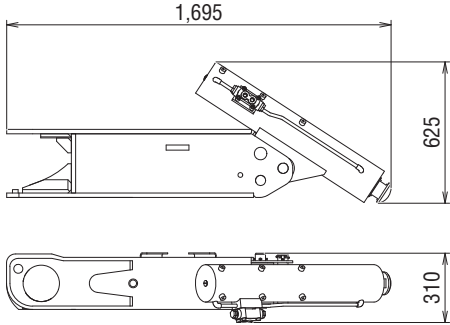
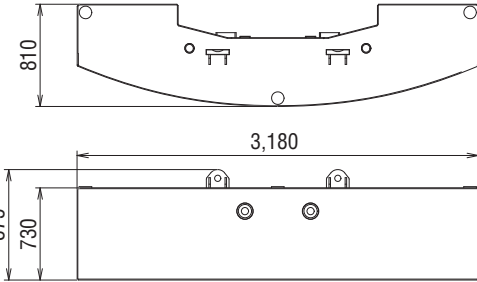
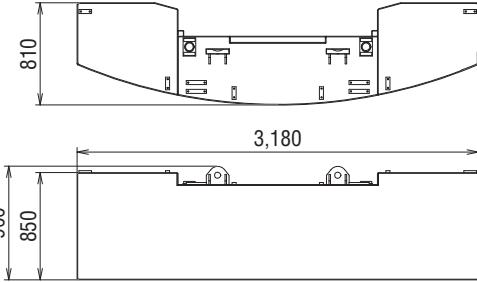
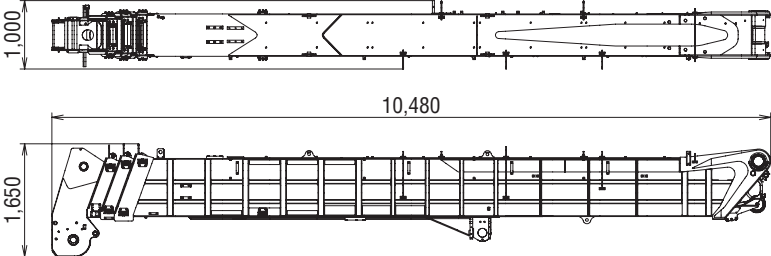
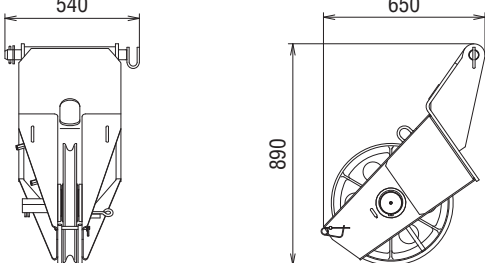
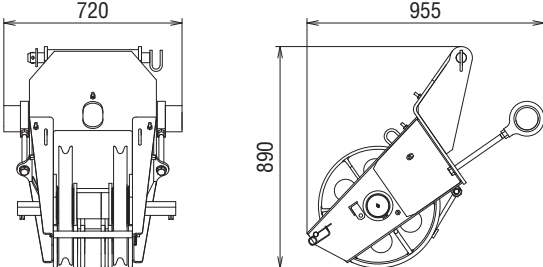
(Unit: metric ton)

Working radius (m)	Boom length (m)			Working radius (m)
		10.0	16.7	
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

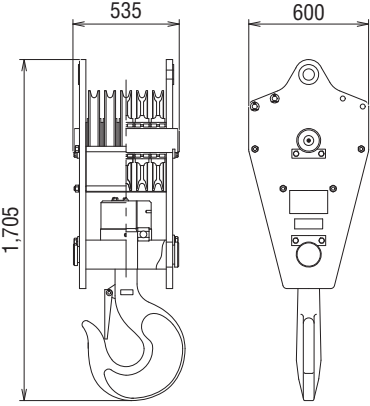
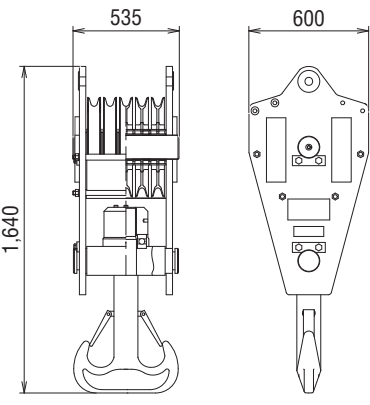
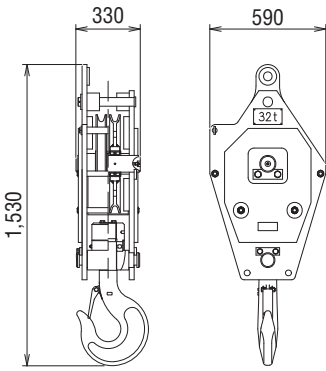
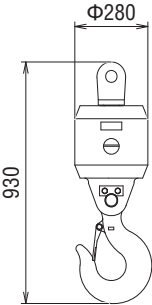
TRANSPORTATION PLAN

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	 <p data-bbox="970 1585 1292 1653">Weight of boom raise cylinder is contained</p>	27,400
Crawler		7,500

PARTS AND ATTACHMENTS

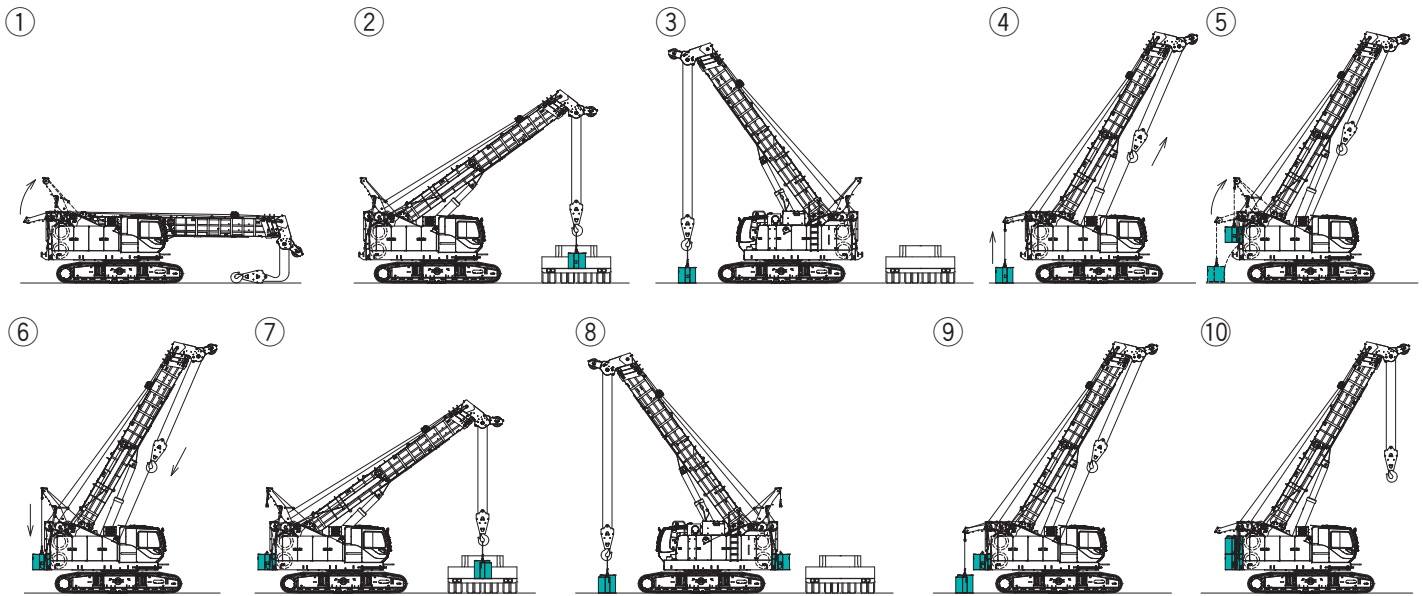
Name	Dimension (mm)	Weight (kg)
Translifter		345
Counterweight (1)		8,200
Counterweight (2)		9,000
Boom Assy		9,710
Single Sheave Type Auxiliary Sheave		115
Double Sheave Type Auxiliary Sheave (Option)		225

PARTS AND ATTACHMENTS

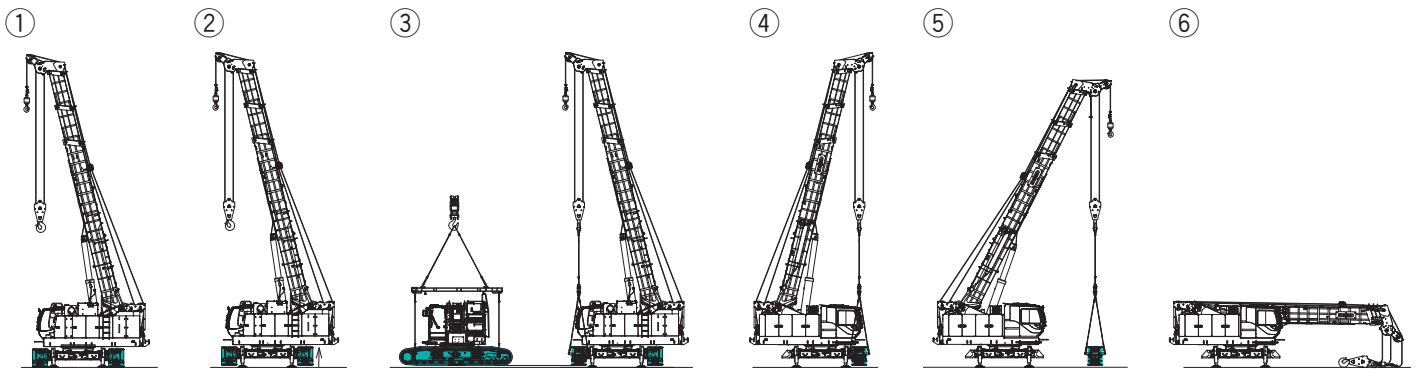
Name	Dimension (mm)	Weight (kg)
75 t Hook (Single Hook)		800
75 t Hook (Double Hook) (Option)		800
32 t Hook (Single Hook)		500
7 t Ball Hook		160

SELF-REMOVAL DEVICE

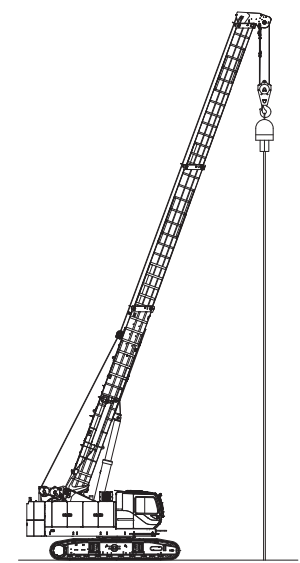
Counterweight (Option)



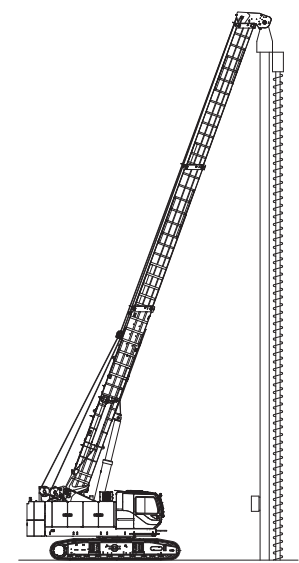
Crawler (Option)



Recommended Attachments

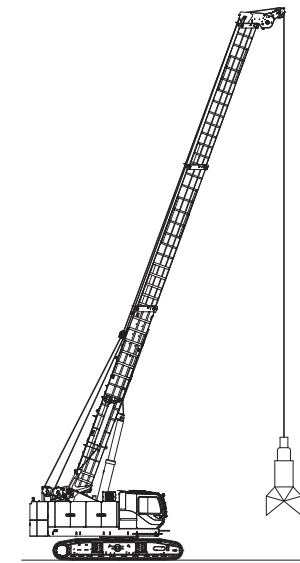


Vibro-hammer



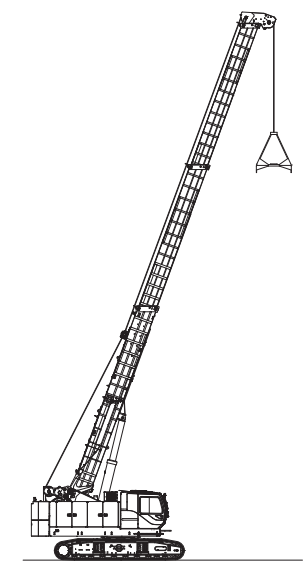
Auger attachments

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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