Telescopic Crawler Crane

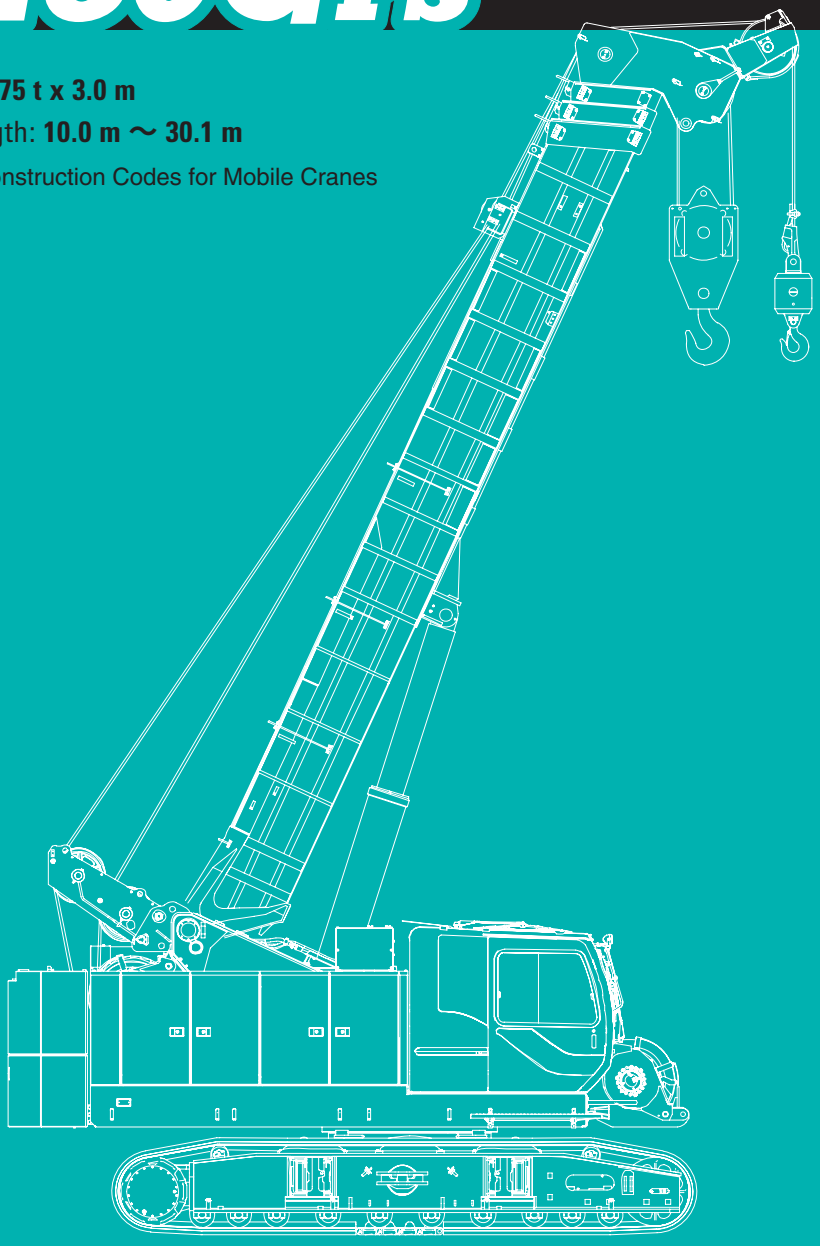
TK750G FS

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

TK750GFS
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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: 614 mm P.C.D x 560 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 110 m working length and 170 m storage length.
Aux. drum: 614 mm P.C.D x 560 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 110 m working length and 170 m storage length.
Third drum: 614 mm P.C.D x 560 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 125 m working length and 170 m storage length.
Diameter of wire rope
Main winch: 26 mm x 110 m
Aux. winch: 26 mm x 110 m
Third winch: 26 mm x 125 m
Line speed*:
Hoisting / lowering: 124.5 to 32.7 m/min
Line pull:
Max. line pull*: 208.1 kN {21.2 tf}
(Referential performance)
Rated line pull: 107.9 kN {11.0 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 fir 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: 73.5 ton
Ground pressure: 87.8 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)

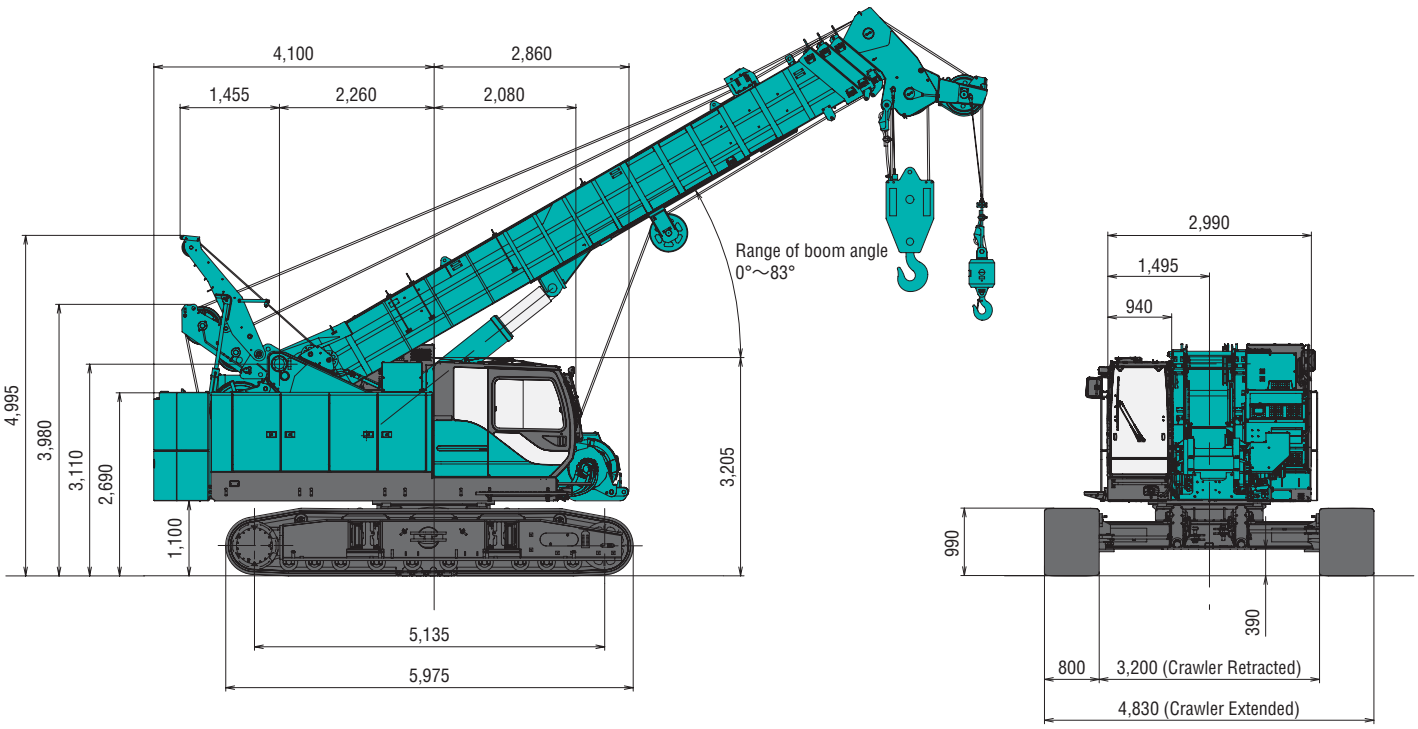
Crane Performance		
Max. Rated Load	10.0 m boom	75.0 t x 3.0 m (8-lines)
	16.7 m boom	36.0 t x 4.5 m (4-lines)
	23.4 m boom	29.0 t x 6.0 m (3-lines)
	30.1 m boom	18.5 t x 8.0 m (2-lines)
	Aux. sheave (Max.)	11.0 t (1-line)
Main Boom Length		10.0 m ~ 30.1 m
Main Hook Max. Height		30.4 m
Main Hook Max. Operating Radios		27.8 m
Winch (Main / Aux. / Third*1)		
Max. Line Speed (1st layer)		125 m/min
Rated Line Pull (Single line)		107.9 kN {11.0 tf}
Max. Line Pull (Referential performance)		208.1 kN {21.2 tf}
Wire Rope Diameter		26 mm
Wire Rope Length		110 m (Main), 110 m (Aux.), 125 m (Third *1)
Brake Type (Free fall)		Wet-type multiple disc brake (Standard)
Working Speed		
Swing Speed		2.5 min^{-1} {2.5 rpm}
Travel Speed		1.7 / 1.2 (High / Low select) km/h
Boom Telescoping Speed		125 sec / 20.1 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	73.5 t
Ground Pressure	87.8 kPa {0.90 kgf/cm^2}
Counterweight	17,200 kg
Transport Weight	29,600 kg (31,500 kg *2)

*1 Third winch is optional
*2 With optional parts and attachments

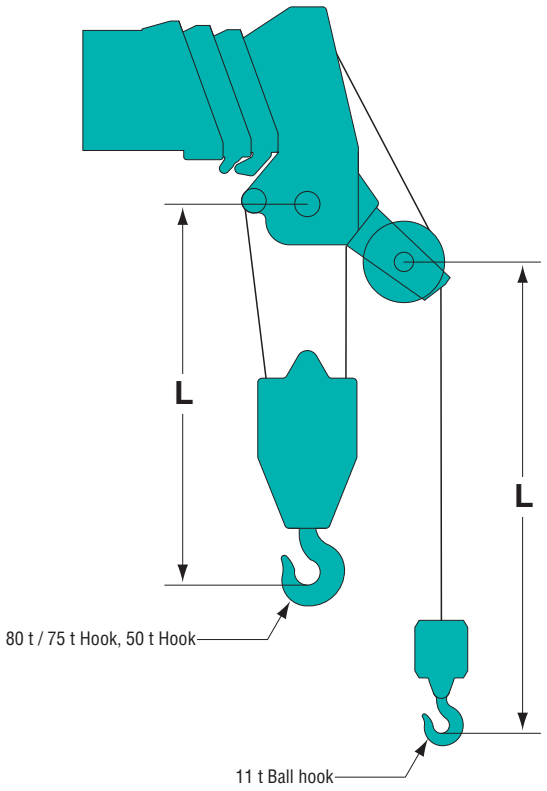
Counterweight Self-Removal Device Extended

(Unit: mm)

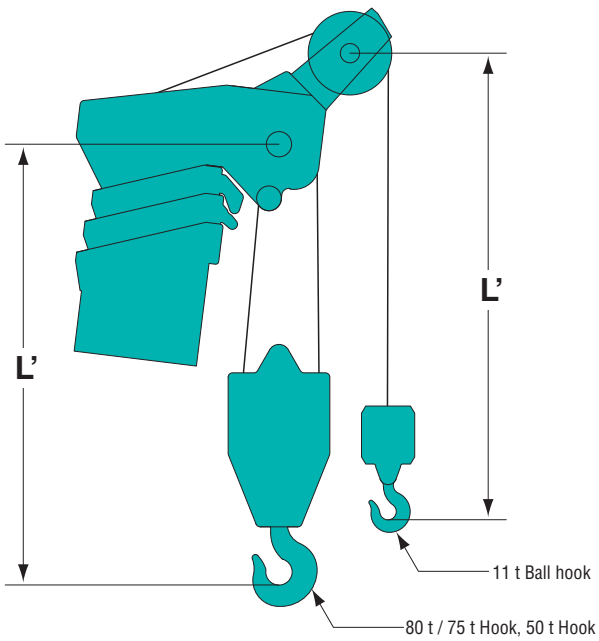


Limit of Hook Lifting

Boom Horizontal

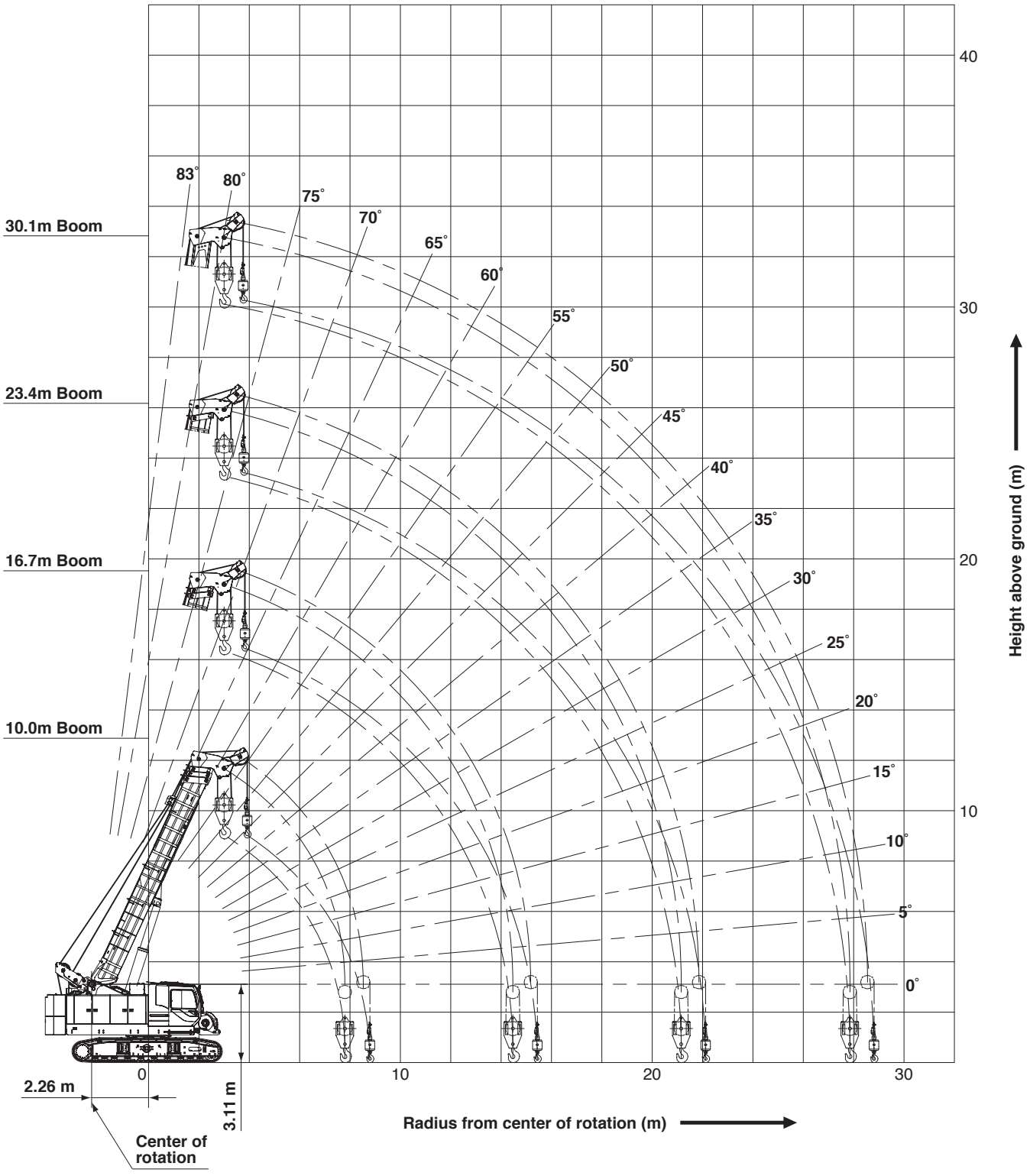


Boom at Maximum Angle



Hook	L	L'
80 t / 75 t	2,690 mm	3,033 mm
50 t	2,587 mm	2,931 mm
11 t Ball hook	3,327 mm	3,211 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	50 t	50 t (Single hook)	32 t	11 t
Weight	950 kg	860 kg	850 kg	550 kg	300 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. 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 min. boom angle, be fully careful, since the basic machine may overturn with no load.)

6. 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 11,000 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		50 / 32	
Number of parts line	8	4	3	2

7. 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 11,000 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		50 / 32	
Number of parts line	8	4	3	2

8. 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
Crawler is fully extended

(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	26.3	25.1	21.6	18.5	**7.5**
7.7	25.1	24.4	20.9	18.5	**7.7**
8.0		23.3	20.0	18.5	**8.0**
8.5		21.2	19.0	17.0	**8.5**
9.0		19.4	18.1	15.5	**9.0**
9.5		17.9	17.0	14.5	**9.5**
10.0		16.5	16.3	13.5	**10.0**
11.0		14.2	14.1	12.8	**11.0**
12.0		12.4	12.3	11.8	**12.0**
13.0		11.0	10.8	11.0	**13.0**
14.0		9.7	9.5	9.9	**14.0**
14.4		9.3	9.1	9.5	**14.4**
15.0			8.5	9.0	**15.0**
16.0			7.6	8.2	**16.0**
17.0			6.6	7.4	**17.0**
18.0			6.2	6.7	**18.0**
19.0			5.6	6.1	**19.0**
20.0			5.0	5.5	**20.0**
21.0			4.6	5.1	**21.0**
21.1			4.5	5.0	**21.1**
22.0				4.6	**22.0**
23.0				4.2	**23.0**
24.0				3.9	**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.

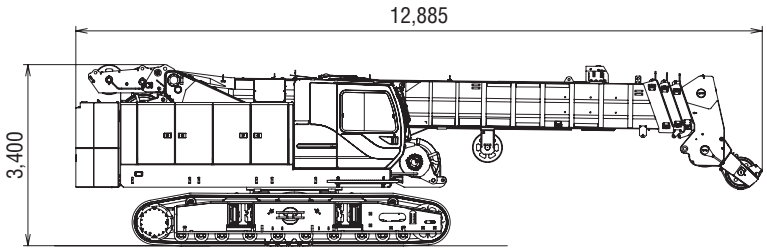
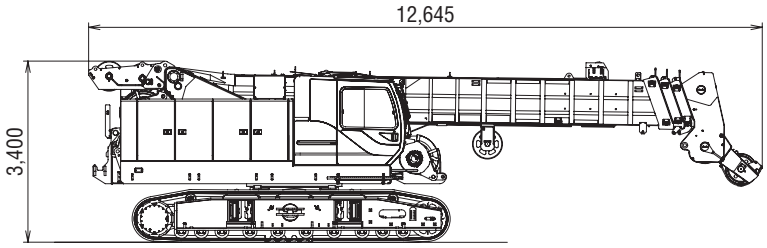
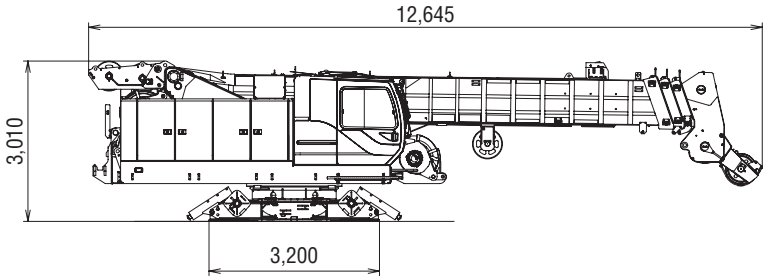
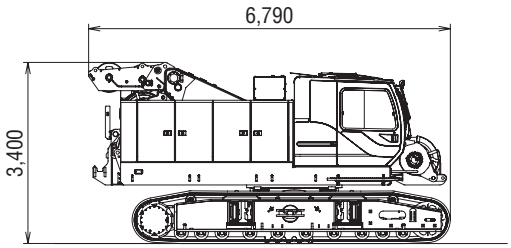
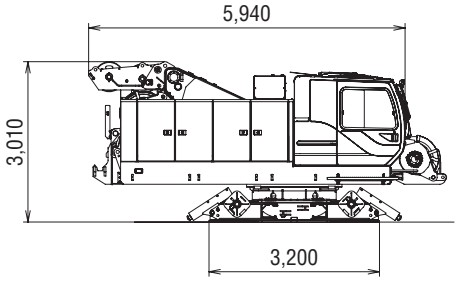
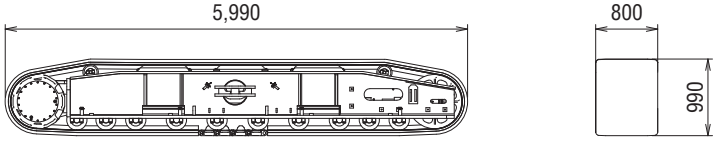
Rated Crane Load Table

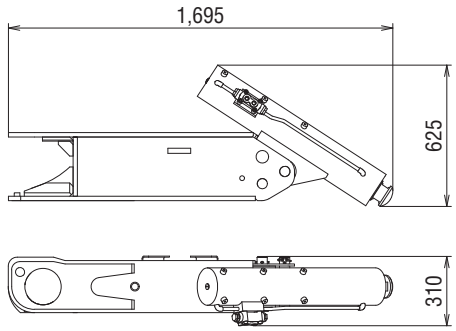
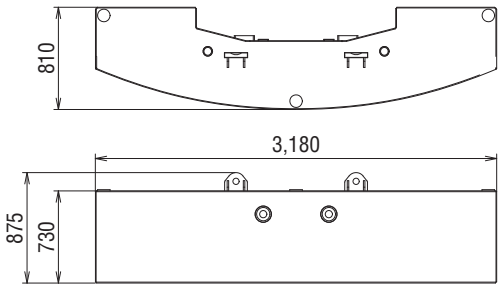
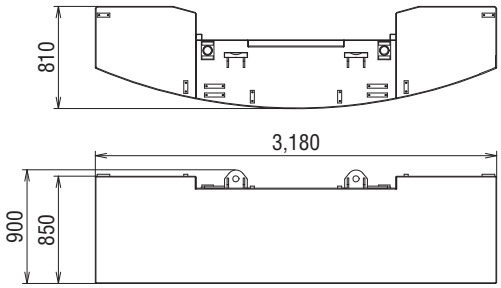
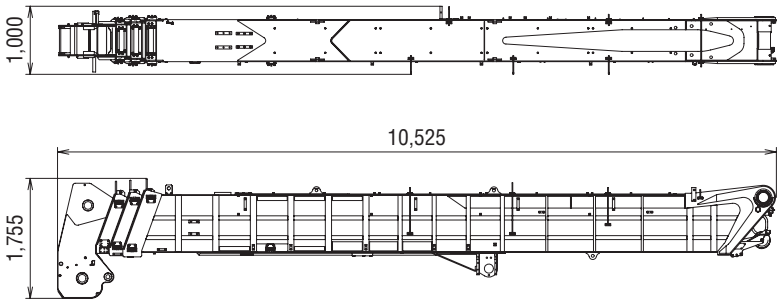
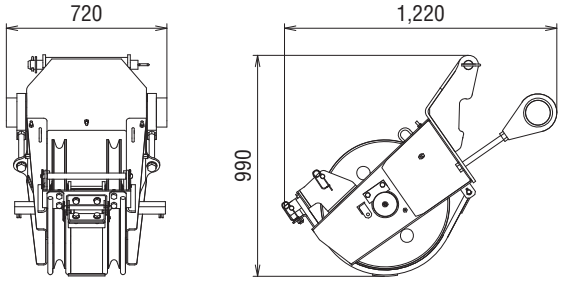
Without Counterweight (Option)
Special type boom rated load

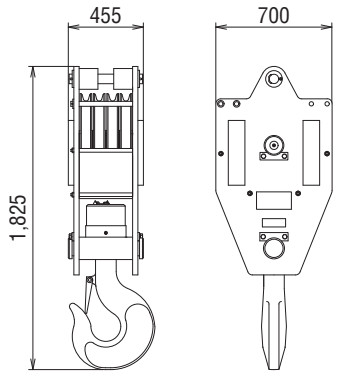
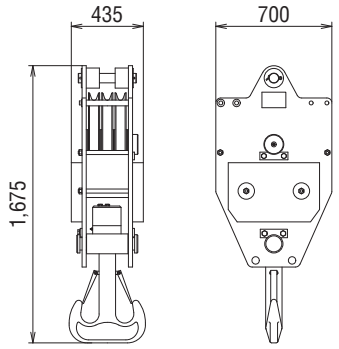
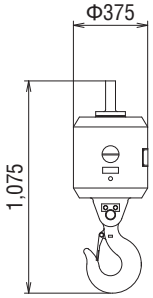
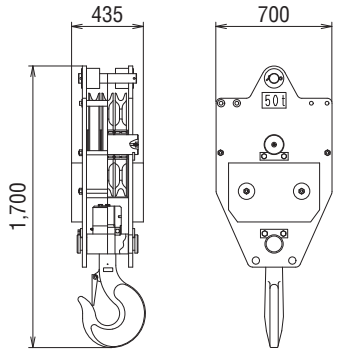
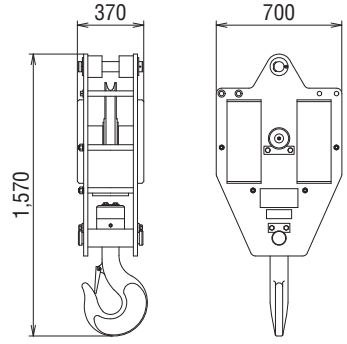
(Unit: metric ton)

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

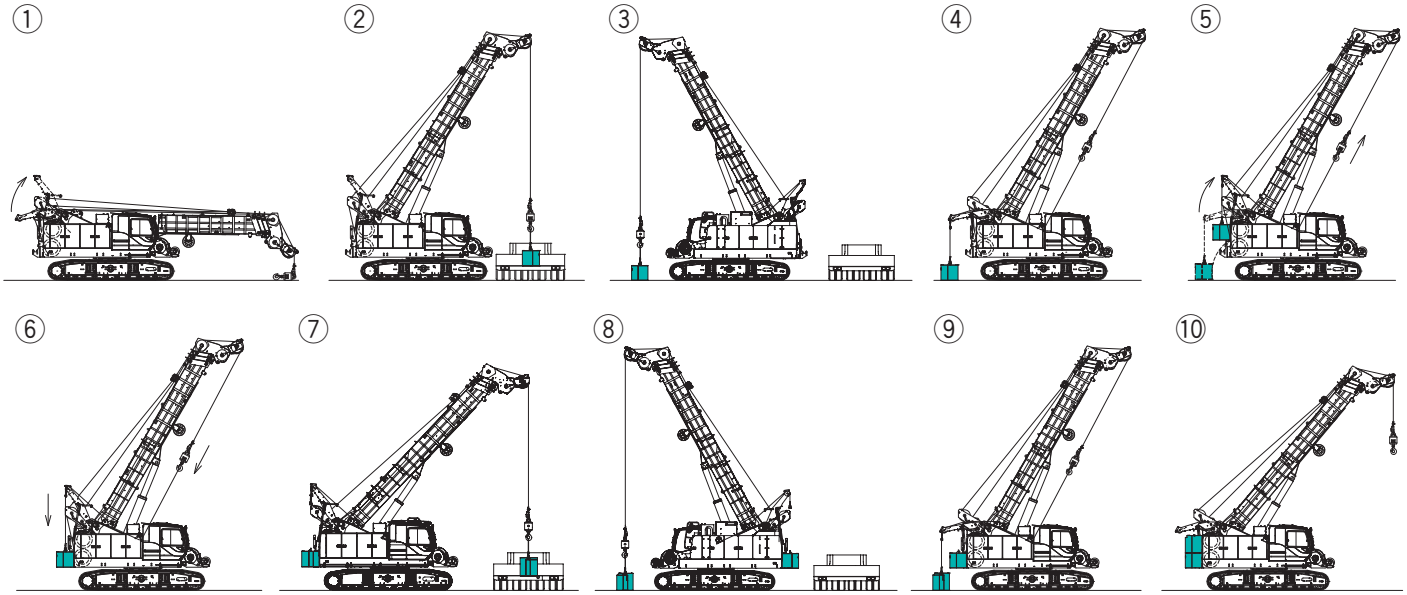
Name	Dimension (mm)	Weight (kg)
Base Machine with counterweight		72,300
Base Machine without counterweight		55,100
Base Machine without counterweight and crawler		40,100
Base Machine without counterweight and boom		44,800
Base Machine without counterweight, crawler and boom	 Weight of boom raise cylinder is contained	29,600
Crawler		7,500

Name	Dimension (mm)	Weight (kg)
Translifter		345
Counterweight (1)		8,200
Counterweight (2)		9,000
Boom Assy		9,990
Double Sheave Type Auxiliary Sheave		300

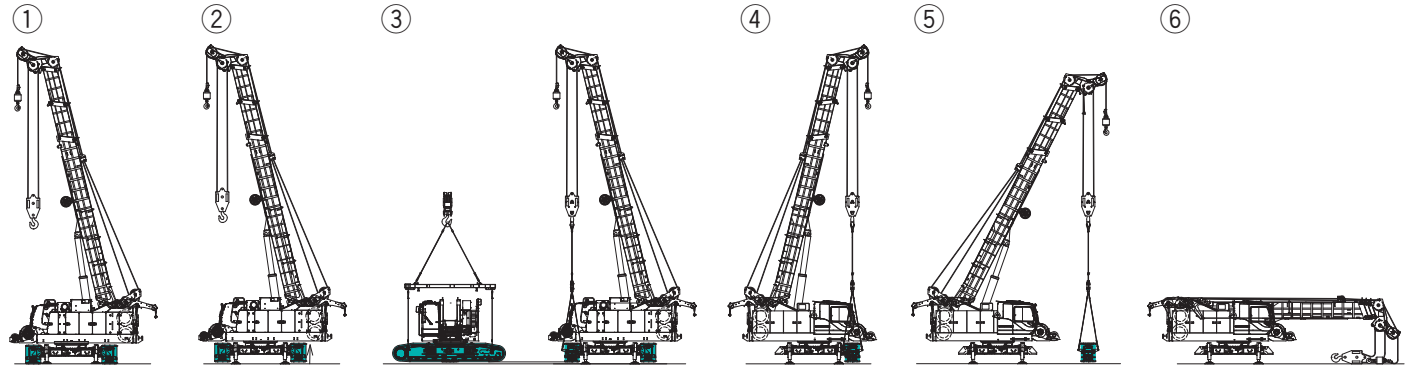
Name	Dimension (mm)	Weight (kg)
75 t Hook (Single Hook)		950
50 t Hook (Double Hook)		860
11 t Ball Hook		300
50 t Hook (Single Hook) (Option)		850
32 t Hook (Single Hook) (Option)		550

SELF-REMOVAL DEVICE

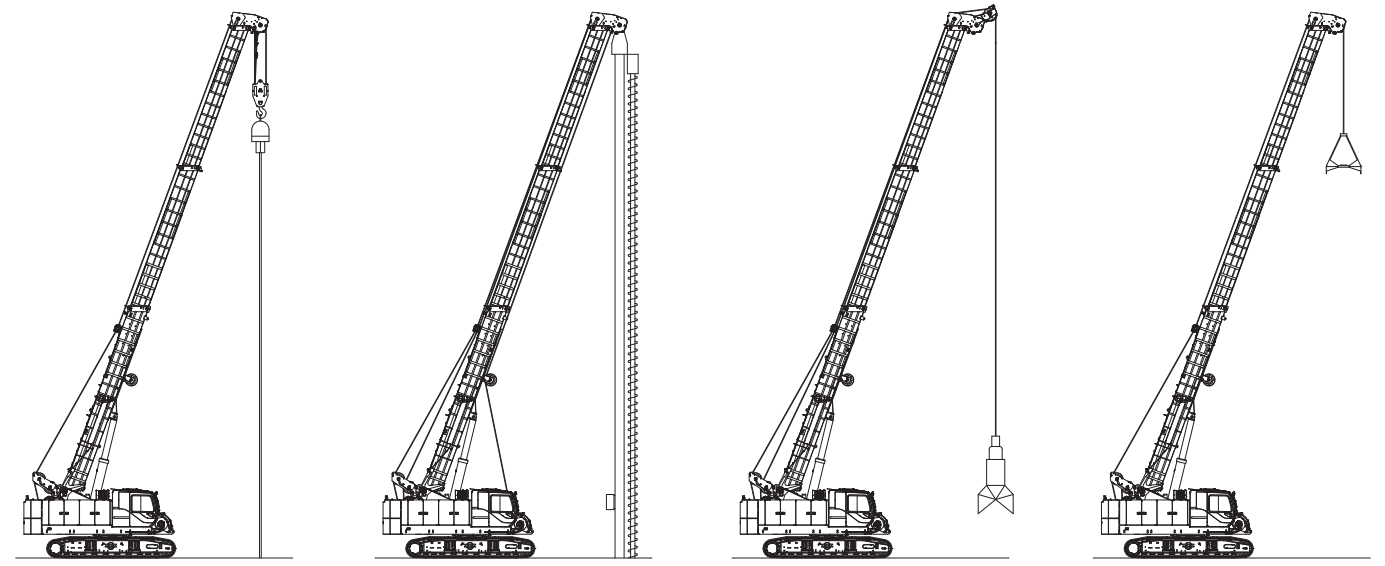
Counterweight (Option)



Crawler (Option)



Recommended Attachments



Vibro-hammer

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

Hammer-grab	
1,500dia.	○
2,000dia. right weight	○
2,000dia. heavy weight	△

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.

KOBELCO CONSTRUCTION MACHINERY CO., LTD.

Inquiries To :

5-15, Kitashinagawa 5-chome, Shinagawa-ku,Tokyo 141-8626 JAPAN
Tel: +81-3-5789-2121 Fax: +81-3-5789-3372
URL: https://www.kobelcocm-global.com

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