

Telescopic Boom Crawler Crane

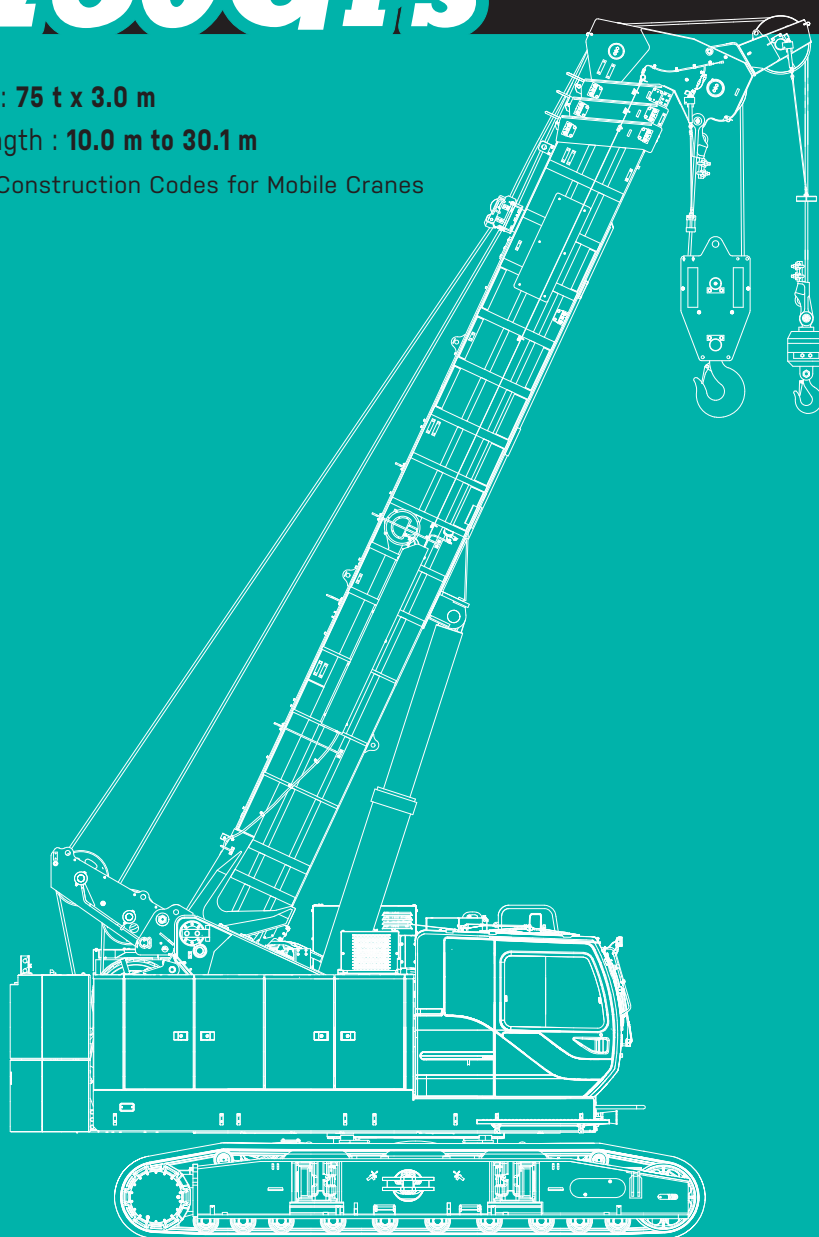
TK750GS

Model : TK750G-2

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



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SPECIFICATIONS



Power Plant

Model: Mercedes-Benz E9H01 (Daimler OM936LA)
Type: Water cooled 4 cycle, 6 cylinder, direct injection diesel with turbocharger, intercooler
Complies with NRMM (Europe) Stage V
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 usable volume: 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 and propel system: 31.9 MPa
Swing system (free): 27.5 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): 27.5 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: 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 (option): 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*: 110 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

**Max. line pull is not based on wire rope strength



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%



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 |



Weight

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

Weight: 71.9 ton

Ground pressure: 85.8 kPa

Main Specifications (Model: TK750G-2)

| 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 to 30.1 m | |
| Main Hook Max. Height | 30.4 m | |
| Main Hook Max. Operating Radius | 27.8 m | |
| Winch (Main / Aux. / Third*1) | | |
| Line Speed (1st layer)*2 | 110 m/min | |
| Rated Line Pull (Single line) | 107.9 kN {11.0 tf} | |
| Max. Line Pull (Referential performance)*3 | 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 | |
| Working Speed | | |
| Swing Speed | 2.5 min ⁻¹ {2.5 rpm} | |
| Travel Speed*2 | 1.6 / 1.1 (High / Low select) km/h | |
| Boom Telescoping Speed | 125 sec / 20.1 m | |
| Boom Raising Speed | 64 sec / 0 to 83 degree | |

| Power Plant | |
|---------------------------------------|---|
| Model | Mercedes-Benz E9H01 (Daimler OM936LA) |
| Engine Output | 254 kW / 2,000 min ⁻¹ |
| Fuel Tank | 400 L |
| AdBlue® Tank Usable Volume | 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 |
| Weight | |
| Operating Weight | 71.9 t |
| Ground Pressure | 85.8 kPa {0.88 kgf/cm ² } |
| Counterweight | 17,200 kg |
| Transport Weight | 27,700 kg (31,400 kg *3) |

Units are SI units. { } indicates conventional units.

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

*1 Third winch is optional

*2 Calculations changed from previous model, but the actual working speed is the equivalent.

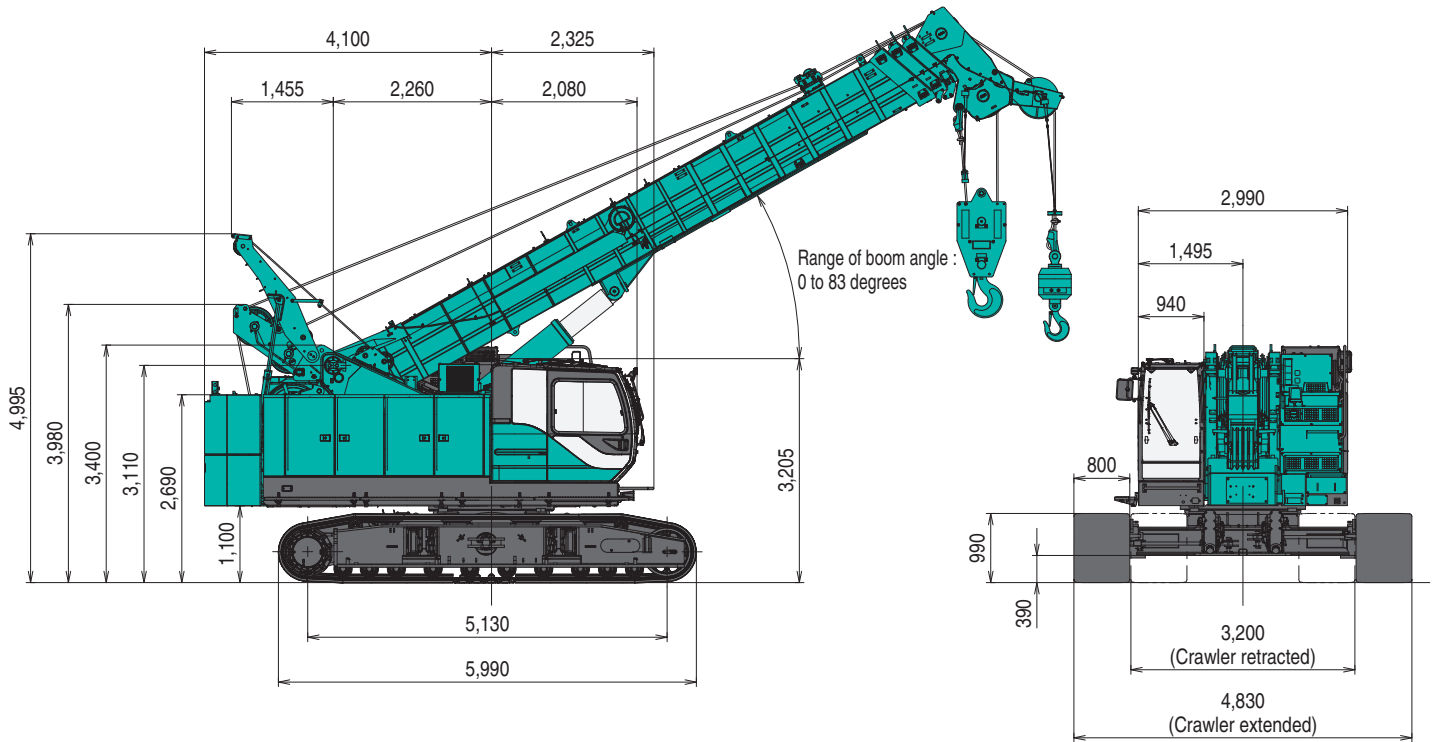
*3 Max. line pull is not based on wire rope strength.

*4 With third winch and other optional parts / attachments.

GENERAL DIMENSIONS

Counterweight Self-Removal Device Extended

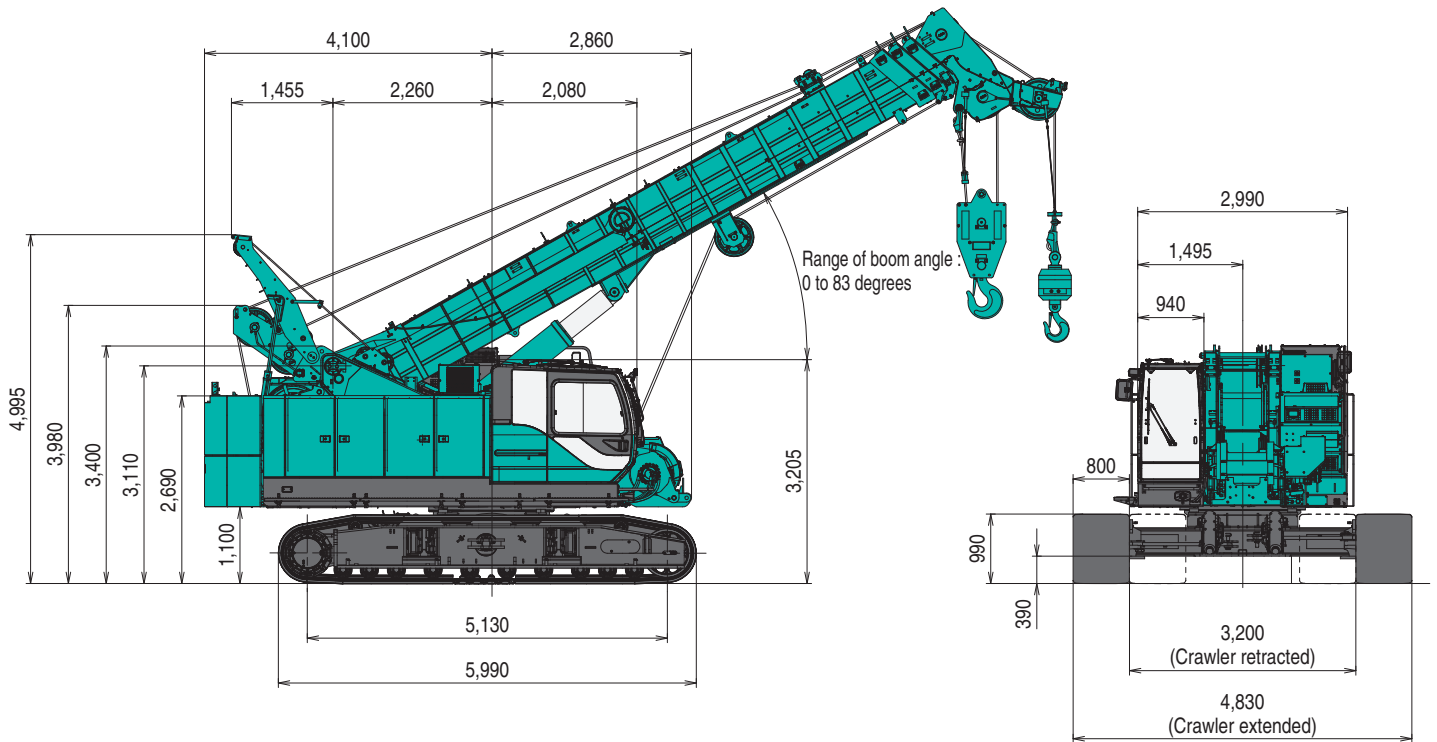
(Unit: mm)



With Third Drum (Option)

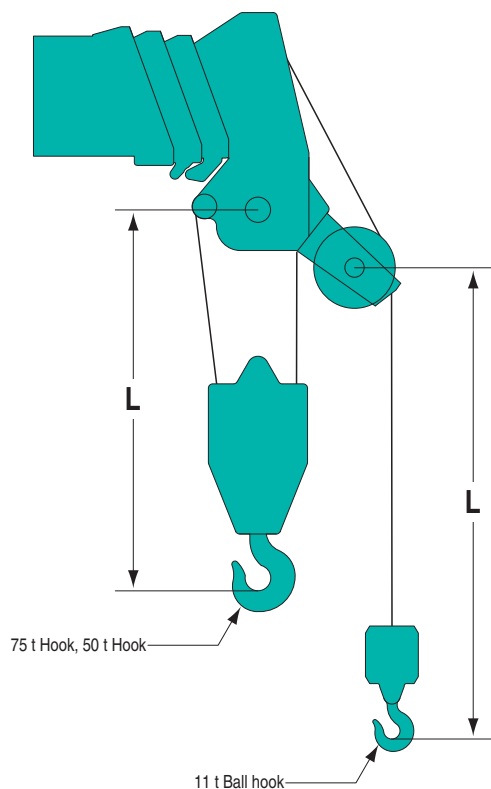
Counterweight Self-Removal Device Extended

(Unit: mm)

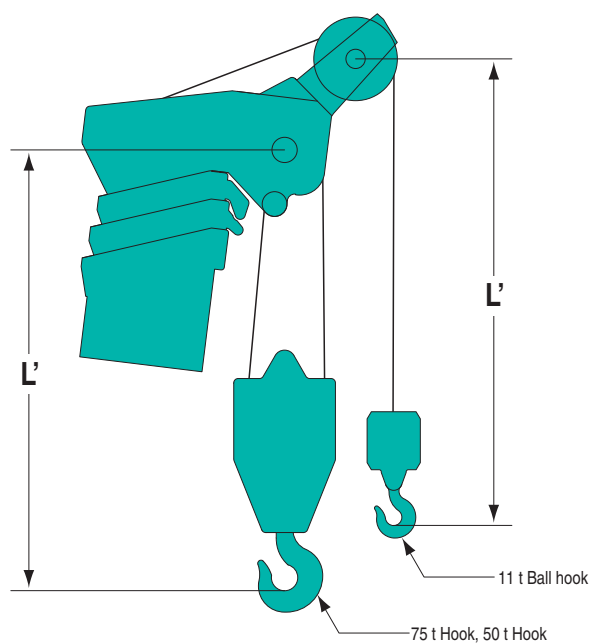


Limit of Hook Lifting

Boom Horizontal



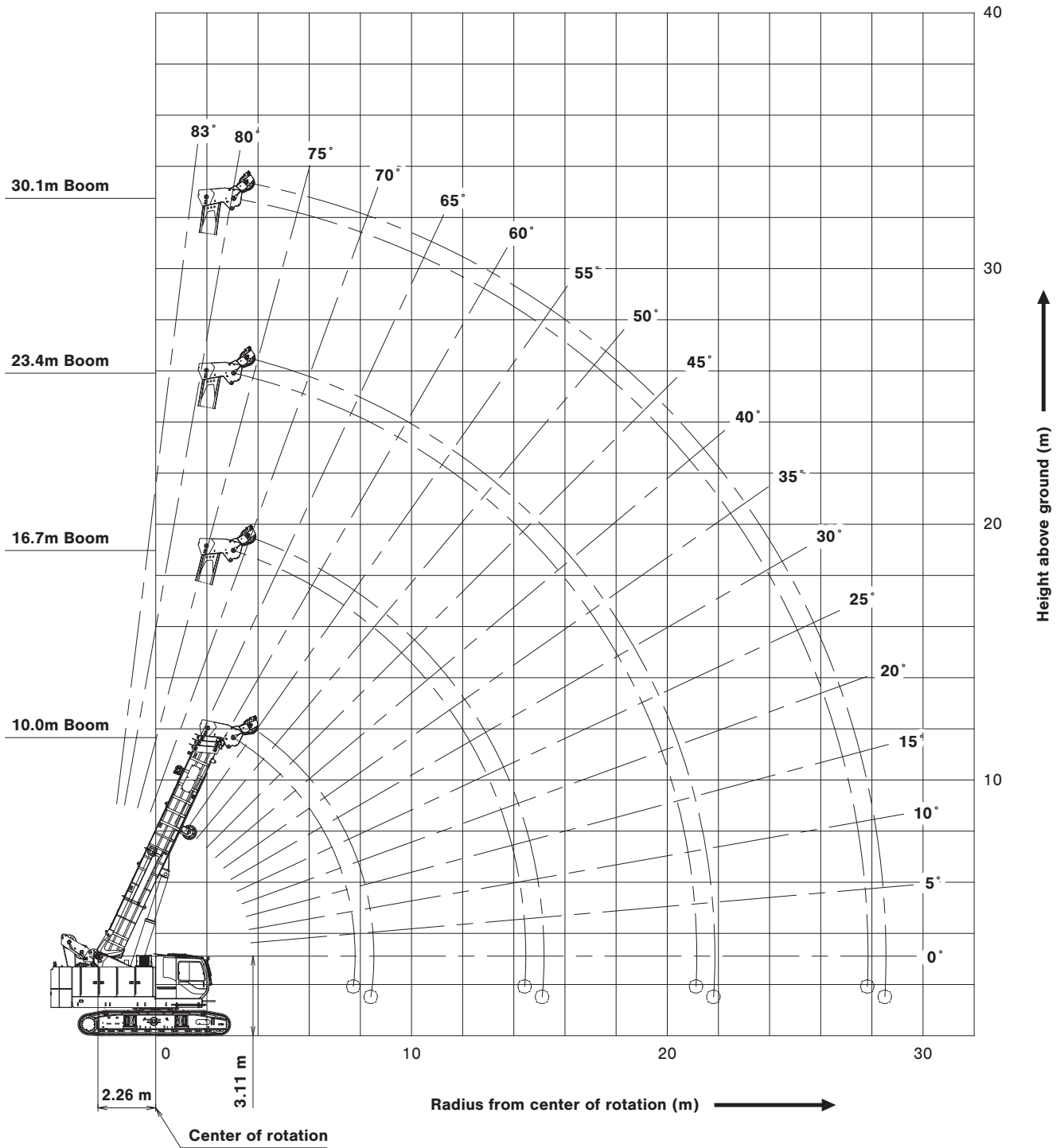
Boom at Maximum Angle



Auxiliary Sheave
(Single / Double [Option] Sheave)

| Hook | L | L' |
|----------------|----------|----------|
| 75 t | 2,625 mm | 2,965 mm |
| 50 t | 2,485 mm | 2,825 mm |
| 11 t Ball hook | 3,125 mm | 3,010 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 | 50 t | 32 t | 11 t | 11 t Lightweight type |
| Weight | 950 kg | 860 kg | 550 kg | 300 kg | 95 kg |



When uses of the lightweight hook, 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 rated capacity of the auxiliary sheave shall be equal to the rated capacity of the boom minus the weight of the hook used for the main lift, and shall be limited to 11,000 kg.

6. 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.)

7. 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 |

8. 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 |

9. 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



Crane Rated Load Chart

Counterweight: 17.2 t
Crawler is fully extended

(Unit: metric ton)

| Working radius (m) | Boom length (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 | | 47.0 | 36.0 | 29.0 | 18.5 | 4.5 | |
| 5.0 | | 43.2 | 35.0 | 29.0 | 18.5 | 5.0 | |
| 5.5 | | 38.8 | 33.0 | 29.0 | 18.5 | 5.5 | |
| 6.0 | | 35.2 | 30.7 | 29.0 | 18.5 | 6.0 | |
| 6.5 | | 31.8 | 29.8 | 26.1 | 18.5 | 6.5 | |
| 7.0 | | 29.0 | 27.2 | 23.2 | 18.5 | 7.0 | |
| 7.5 | | 26.4 | 25.1 | 21.6 | 18.5 | 7.5 | |
| 8.0 | 7.7m/16.2 | | 23.3 | 20.0 | 18.5 | 8.0 | |
| 8.5 | | | 21.4 | 19.0 | 17.0 | 8.5 | |
| 9.0 | | | 19.7 | 18.1 | 15.5 | 9.0 | |
| 9.5 | | | 18.1 | 17.0 | 14.5 | 9.5 | |
| 10.0 | | | 16.8 | 16.3 | 13.5 | 10.0 | |
| 11.0 | | | 14.4 | 14.3 | 12.8 | 11.0 | |
| 12.0 | | | 12.5 | 12.4 | 11.8 | 12.0 | |
| 13.0 | | | 11.0 | 10.9 | 11.0 | 13.0 | |
| 14.0 | | | 9.7 | 9.6 | 9.9 | 14.0 | |
| 15.0 | | 14.4m/9.3 | | 8.5 | 9.0 | 15.0 | |
| 16.0 | | | | 7.6 | 8.2 | 16.0 | |
| 17.0 | | | | 6.8 | 7.4 | 17.0 | |
| 18.0 | | | | 6.2 | 6.7 | 18.0 | |
| 19.0 | | | | 5.5 | 6.1 | 19.0 | |
| 20.0 | | | | 5.0 | 5.5 | 20.0 | |
| 21.0 | | | | 4.5 | 5.1 | 21.0 | |
| 22.0 | | | | 21.1m/4.4 | 4.6 | 22.0 | |
| 23.0 | | | | | 4.2 | 23.0 | |
| 24.0 | | | | | 3.8 | 24.0 | |
| 25.0 | | | | | 3.5 | 25.0 | |
| 26.0 | | | | | 3.1 | 26.0 | |
| 27.0 | | | | | 2.8 | 27.0 | |
| 28.0 | | | | | 27.8m/2.6 | 28.0 | |
| 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.

Lifting capacities may vary depending on hook used.

Please refer rated chart in operator's cabin.



Crane Rated Load Chart

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 |
| 8.0 | | 7.7m/16.2 | 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 |
| 15.0 | | | 14.4m/5.8 | 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 |
| 22.0 | | | | 21.1m/2.1 | 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.

Lifting capacities may vary depending on hook used.

Please refer rated chart in operator's cabin.



Crane Rated Load Chart

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 |
| 8.0 | | 7.7m/10.9 | 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 |
| 15.0 | | | 14.4m/3.0 | 15.0 |
| Max. boom angle | | 65° | 76° | Max. boom angle |
| Min. boom angle | | 0° | 0° | Min. boom angle |

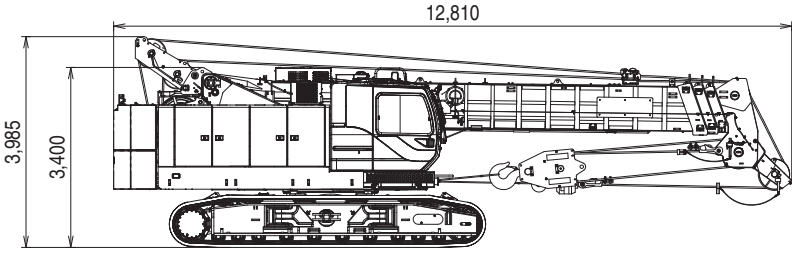
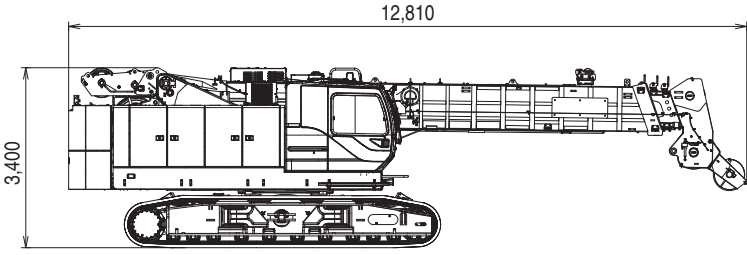
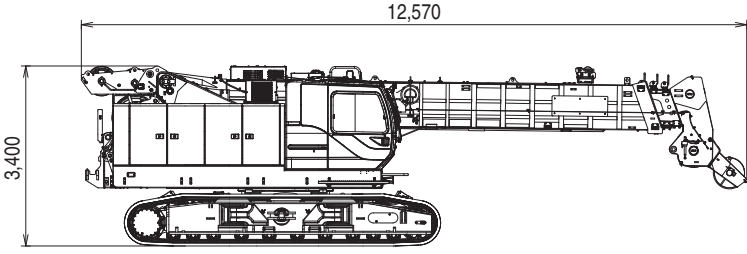
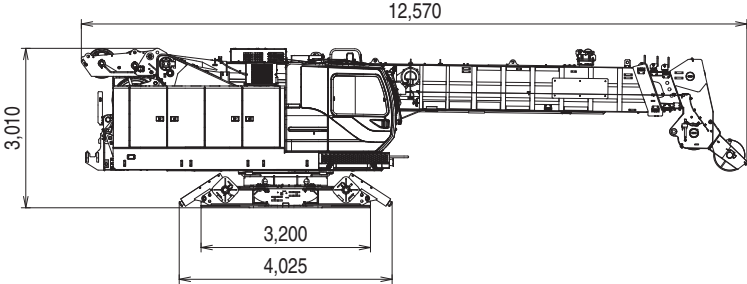
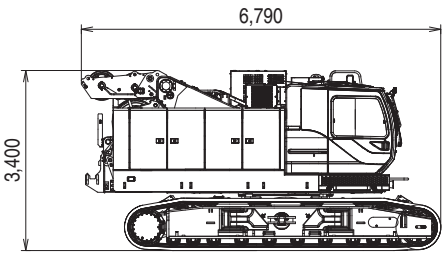
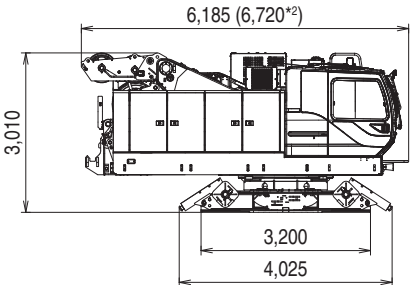
Note:

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

Lifting capacities may vary depending on hook used.

Please refer rated chart in operator's cabin.

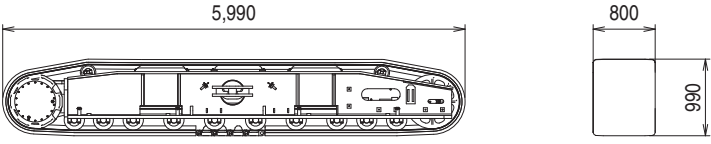
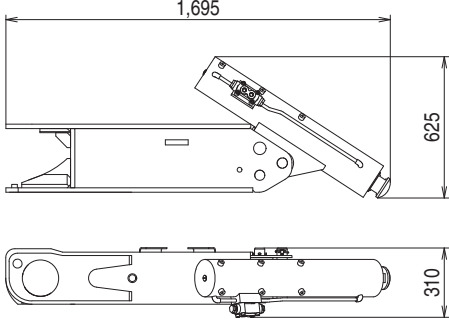
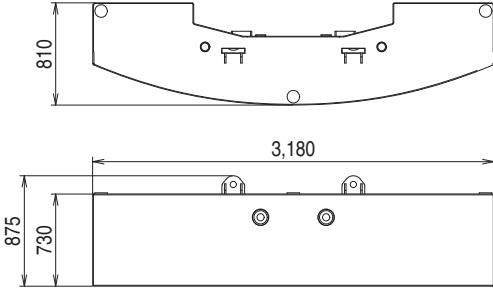
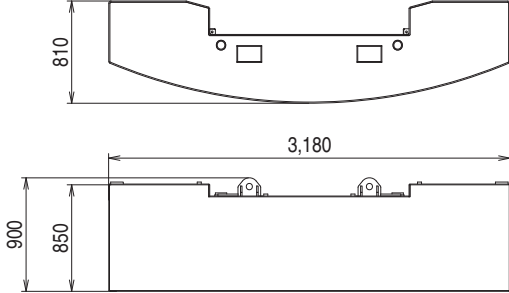
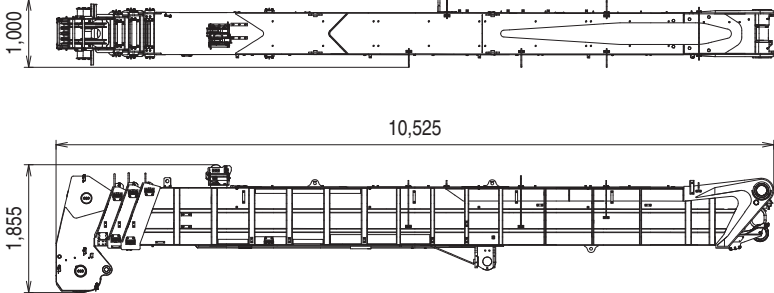
TRANSPORTATION PLAN

| Name | Dimension (mm) | Weight (kg) |
|---|--|-----------------------------------|
| Base Machine with hook |  | 71,900 (76,300* ¹) |
| Base Machine without hook |  | 70,600 (75,100* ¹) |
| Base Machine without hook and counterweight |  | 53,400 (57,800* ¹) |
| Base Machine without hook, counterweight and crawler |  | 38,200 (42,500* ¹) |
| Base Machine without hook, counterweight and boom |  | 43,100 (46,900* ¹) |
| Base Machine without hook, counterweight, crawler, boom, side catwalk and crawler connect link |  | 27,700 (31,400* ¹) |

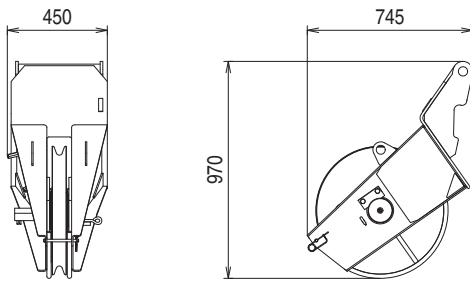
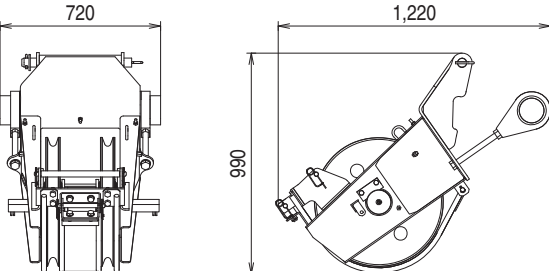
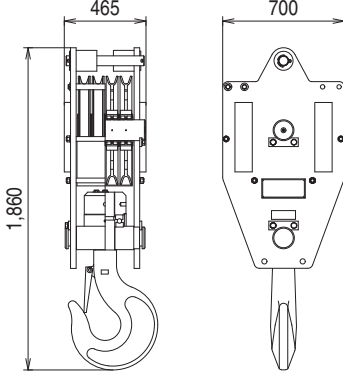
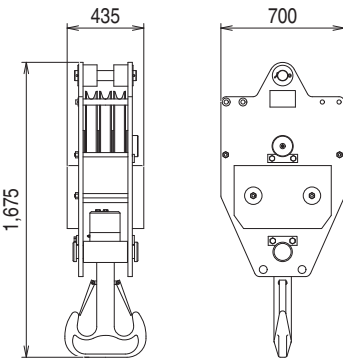
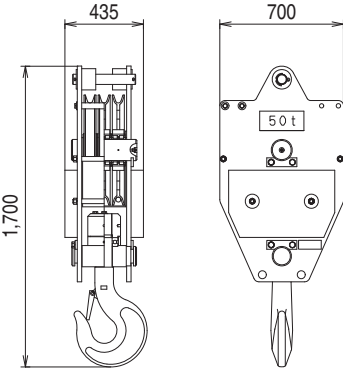
*¹ With third winch and other optional parts / attachments

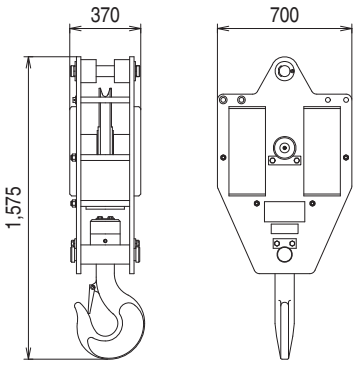
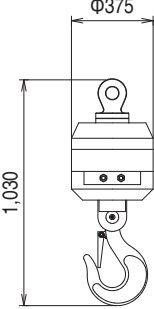
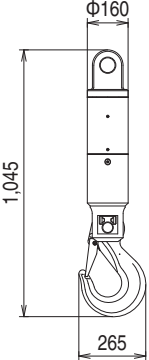
*² With third winch

PARTS AND ATTACHMENTS

| Name | Dimension (mm) | Weight (kg) |
|-----------------------------------|--|-------------|
| Crawler |  | 7,500 |
| Translifter (4 pieces) |  | 345 / 1 pcs |
| Counterweight (1) |  | 8,200 |
| Counterweight (2) |  | 9,000 |
| Boom Assy |  | 10,100 |

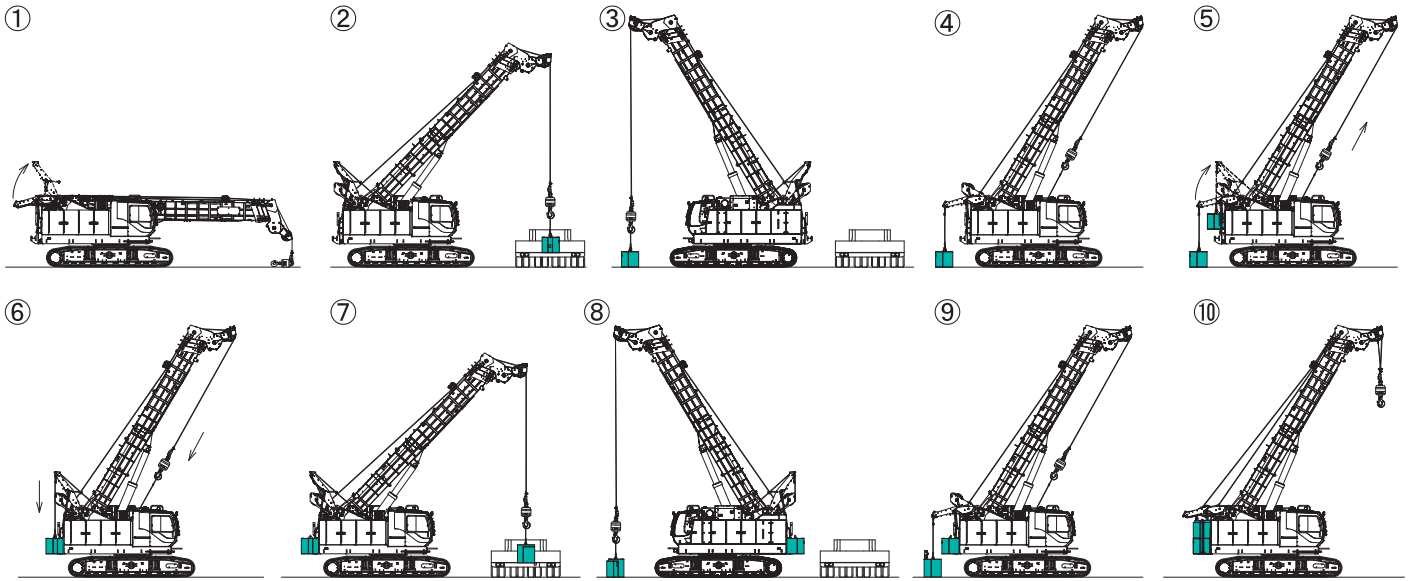
PARTS AND ATTACHMENTS

| Name | Dimension (mm) | Weight (kg) |
|--|--|-------------|
| Auxiliary Sheave (Single Sheave) |  | 160 |
| Auxiliary Sheave (Double Sheave) (Option) |  | 300 |
| 75 t Hook (Single Hook) |  | 950 |
| 50 t Hook (Double Hook) |  | 860 |
| 50 t Hook (Single Hook) |  | 860 |

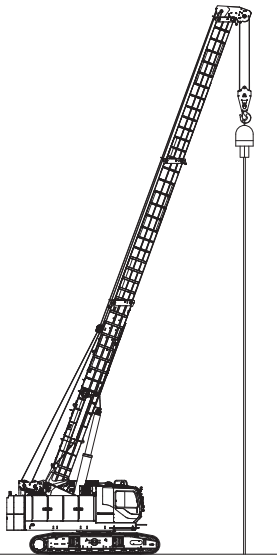
| Name | Dimension (mm) | Weight (kg) |
|-------------------------------------|---|-------------|
| 32 t Hook (Single Hook) |  | 550 |
| 11 t Ball Hook |  | 300 |
| 11 t lightweight swivel hook |  | 95 |

PARTS AND ATTACHMENTS

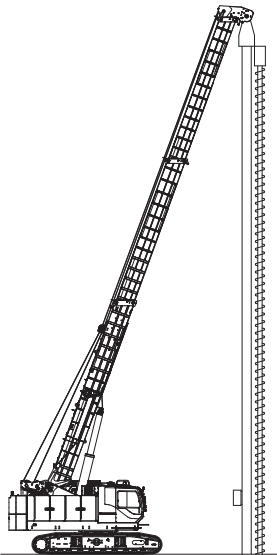
Counterweight Self-Removal Device (Option)



Recommended Attachments

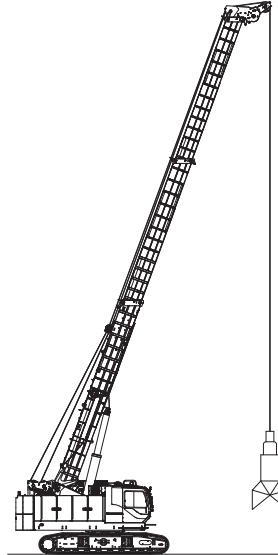


Vibro-hammer



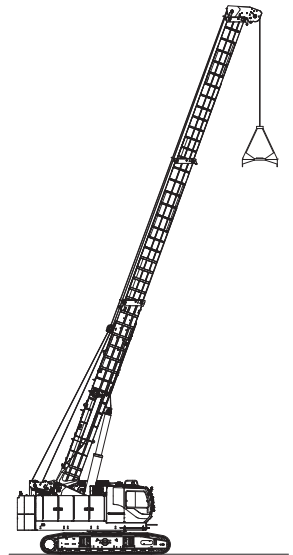
Auger attachments

| |
|-------------------------------|
| Electric type under 44.5kN/m |
| Hydraulic type under 83.1kN/m |



Hammer-grab

| | |
|------------------------|---|
| 1,500dia. | ○ |
| 2,000dia. lightweight | ○ |
| 2,000dia. heavy weight | △ |



Clamshell

| |
|------------------------------------|
| Total weight under 5.5 metric tons |
|------------------------------------|

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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