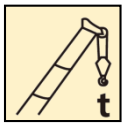
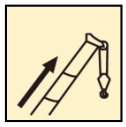
# XCT25L4_Y1 Truck Crane

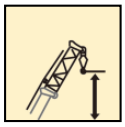
## Technical specifications




25 t



34 m



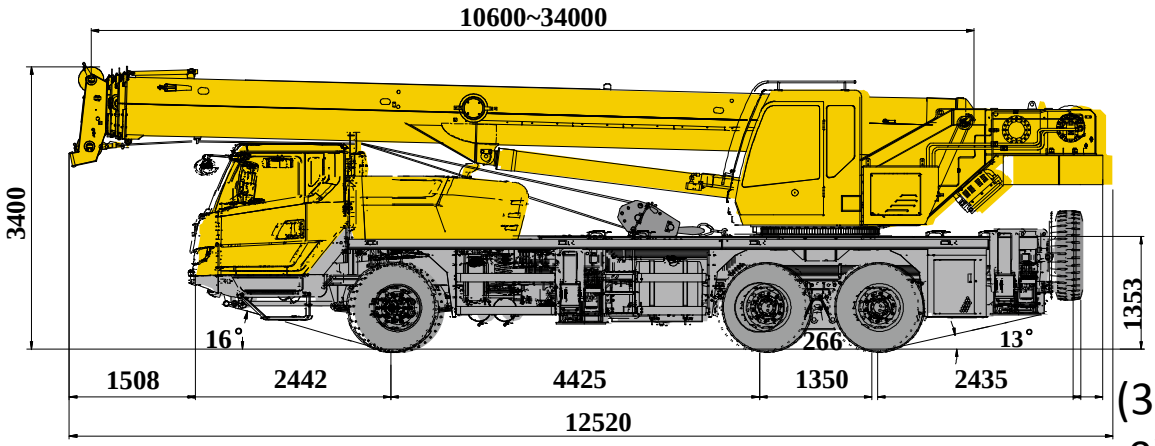
43.2 m


**BSV**

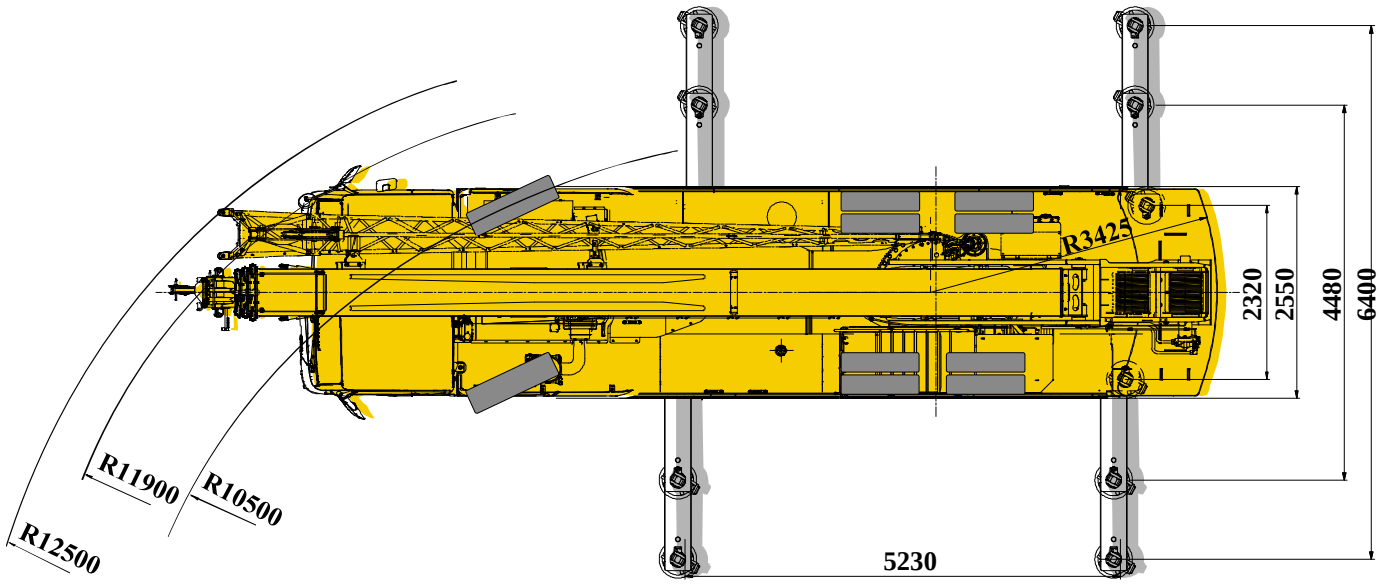
**2nd edition, June 2024**

## Contents

## Dimensions




(360)



# Technical specifications

| Chassis | | |
|---|---|---|
| **Frame** | Designed and manufactured by XCMG, the frame is made of high strength steel with fully covered walking surface and anti-torsion box-typed structure. | ● |
| **Outrigger** | Four outriggers arranged in H-shape are hydraulically controlled by control levers. There is an outrigger control station located at each side of the chassis, and there is a level gauge on each control station. The outrigger movements can be simultaneously or separately controlled at any side of the chassis. There is a check valve fitted in each outrigger cylinder, and a double-way hydraulic valve fitted in each jack cylinder.<br>Outrigger float diameter: φ400 mm<br>Reaction force of outrigger at max. lifting load: 32.4 t | ● |
| | The 5th jack | ○ |
| **Engine** | SC7H200G5E, in-line, 6-cylinder, supercharged, intercooled diesel engine, made by SDEC,<br>rated power of 149kW/2200rpm,<br>max. torque 860Nm /1400rpm,<br>max. reference torque: 1200N.m, compliant with BSV (CEV V) emission standard.<br>Fuel tank capacity: 260 L;<br>AdBlue/DEF tank capacity: 35 L. | ● |
| **Transmission** | Mechanical transmission , made by Shaanxi Fast Gear Co., Ltd., 8-forward speed and 2-reverse speed. | ● |
| **Axles** | 3-axle chassis, axle 1 is for steering, axles 2 and 3 are driving. | ● |
| **Suspension system** | Front suspension: leaf springs with tapered cross-section, light dead weight, low noise and great comfort;<br>Rubber suspensions with V-type push rod for rear suspensions, featuring light dead weight, better positioning effect, free of maintenance. | ● |
| **Tires** | 10 tires and 1 spare tire. The front axle is equipped with single tire, the middle and rear axles are equipped with double-tire.<br>Tire specifications: 12R22.5. | ● |
| **Brakes** | Service brake: dual-circuit air pressure brake acting on all wheels.<br>Parking brake: spring applied brake, acting on the wheels of axles 2-3.<br>Auxiliary brake: engine exhaust brake. | ● |
| **Steering system** | Mechanically steering system with a hydraulic booster | ● |
| **Driver's cab** | Deluxe driver's cab. Equipped with adjustable seats, safety glass, electrically operated door window lifter, electric-adjustable mirrors, steering wheel adjustable in height and angle, etc.<br>A fire extinguisher of 6 kg is available.<br>Heater and air conditioner are standard. | ● |
| **Electrical system** | 24 V DC, two sets of 12 V battery in series.<br>Generator: 28 V-70 A | ● |
| **Safety devices** | Double-way hydraulic lock | ● |
| | Backup camera | ○ |

| Superstructure | | | |
|---|---|---|---|
| **Structure** | Designed and manufactured by XCMG, made of high strength steel. | | ● |
| **Hydraulic system** | Fixed displacement pump+load sensing multi-way valve system; double-pump confluence can be realized for lifting, luffing and telescoping; working speed of main and auxiliary winches is up to 135m/min; double-pump independent oil supply for simultaneous movements of main winch/auxiliary winch and telescoping/luffing can be realized. | | ● |
| **Operating method** | Mechanical control. | | ● |
| **Winch system** | Equipped with Lebus grooved drum, driven by a hydraulic motor, with build-in planetary gear reducer, constant closed brake and balance valve. Wire rope has a rope head, which is directly installed in pouch socket. Time for replacing wire rope is shortened, the replacement is easy and fast.<br>The main winch and auxiliary winch can be independently operated. | Main winch | ● |
| | | Auxiliary winch | ○ |
| **Slewing gears** | A single-row, four-point contact-ball external toothed slewing bearing is driven by hydraulic motor, with built-in planetary gear reducer and constant-closed brake equipped, and may continuously slew 360°. Power control and free slewing function as well as stepless speed regulation are available. | | ● |
| **Luffing system** | Single cylinder with self-compensation balanced valve. | | ● |
| **Operator's cab** | Operator's cab is designed according to ergonomics with outward-open door and adjustable seat.<br>It is equipped with safety glass and roof protective grilles.Windshield is equipped with sun visor.Fan is standard. | | ● |
| | Air conditioner. | | ○ |
| **Electrical system** | 24 V DC, two batteries in series. | | ● |
| **Safety devices** | Hydraulic counterbalance valve; hydraulic relief valve; LMI;<br>spring centering system for control levers; lowering limiter for preventing wire rope from over releasing; free slewing; slewing locking. | | ● |
| | Anti-two block at boom head for preventing wire rope from over-winding; | | ○ |
| **Hook block** | 20 t hook block | | ● |
| | 3 t hook block | | ○ |
| **Counterweight** | 3.2 t fixed counterweight. | | ● |

## Technical specifications

|  | **Boom and jib system** | |
|---|---|---|
| **Boom** | 4-section boom with U cross-section, welding structure. Single-cylinder plus ropes telescoping system<br>Boom length: 10.6 m～34 m. | ● |
| **Jib** | One-section lattice jib, welded structure.<br>Three offset angles of 0°, 15° and 30°.<br>Fixed jib length: 8.3 m. | ○ |
| **Auxiliary sheave** | Installed at the boom top, used for single line operation. Its lifting performance is the same as that for boom, but the max. lifting load could not exceed 2800 kg. | ○ |

**Product parts list is as mentioned above. Please refer to the product quotation for specific parts.**
**Symbol explanation:**
**● —— Standard configurations;**
**○ —— Optional configurations.**

## Weight

| Axle | 1 | 2 | 3 | Total weight |
|---|---|---|---|---|
| t | 6.6 | 9.85 | 9.85 | 26.3 (full configuration) |
| | 5.4 | 9.45 | 9.45 | 25.3 (standard) |

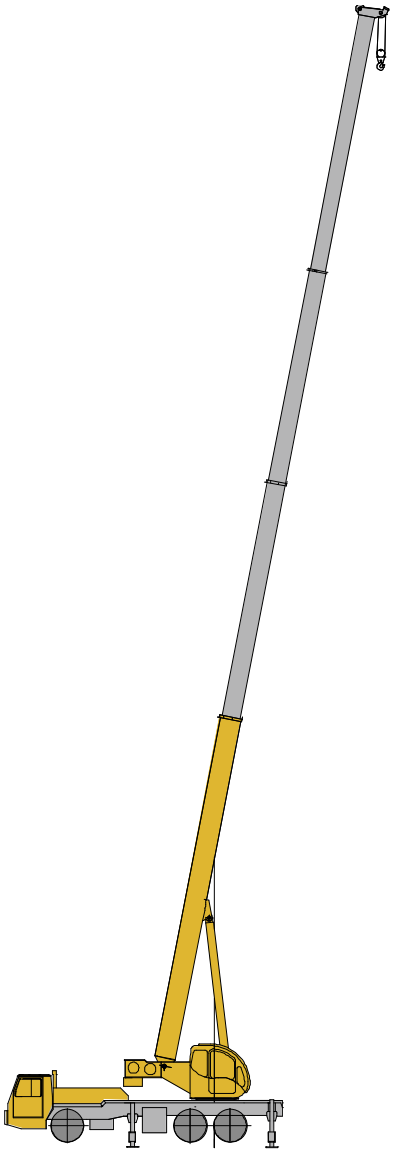
| Hook block | Parts of line | Weight of hook block | Hook dimension | Remark |
|---|---|---|---|---|
| 20t | 7 | 202 | 1249×430×268 | Single hook (standard) |
| 3t | 1 | 60 | 518×236×236 | Single hook (optional) |

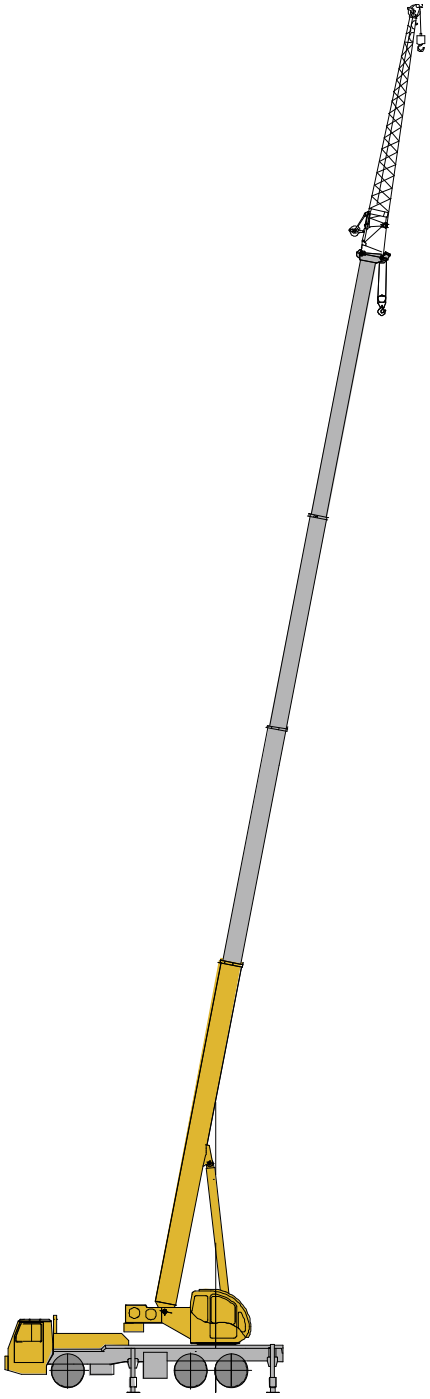
## Working speed

|  |  |  |
|---|---|---|
| 12R22.5 | 2～50 | 32% |

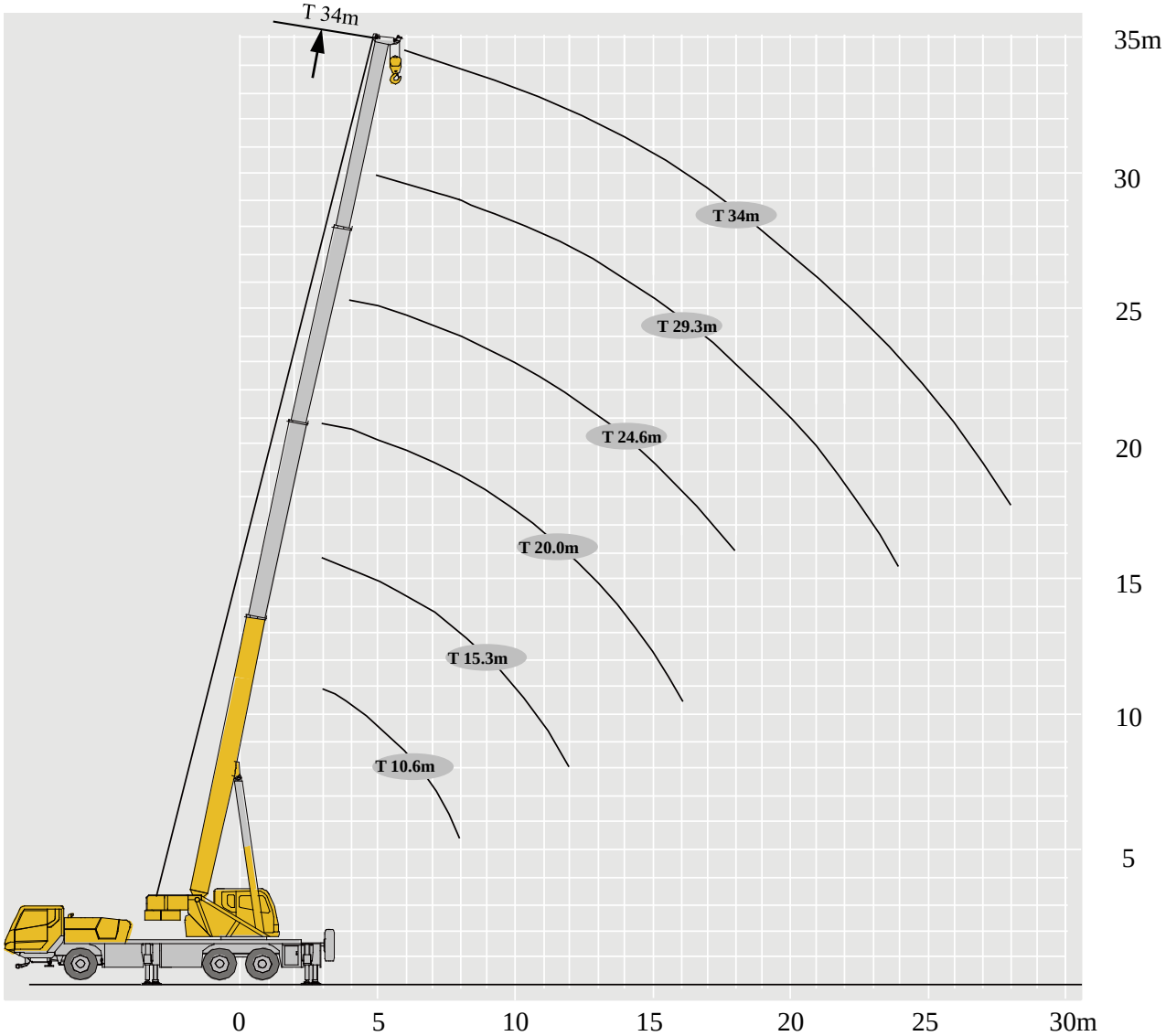
| Operation mechanism | Working speed | Max. single line pull | Rope diameter/ length |
|---|---|---|---|
|  | 0-135 m/min, single line, 4th layer | 3t | 14 mm/170 m |
|  | 0-135 m/min, single line, 4th layer | 3t | 14 mm/110 m |
|  | 0-2.6 r/min | | |
|  | Approx. 35 s for boom luffing from 0° to 80° | | |
|  | Approx. 53 s for boom extending from 10.6 m to 34 m | | |

## Boom / Jib combinations



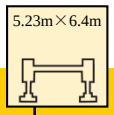


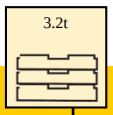
| Boom | Jib |
| --- | --- |
| T:10.6~34m | T：10.6~34m<br>J: 8.3m |


T 34m
T 34m
T 29.3m
T 24.6m
T 20.0m
T 15.3m
T 10.6m
35m
30
25
20
15
10
5
0
5
10
15
20
25
30m

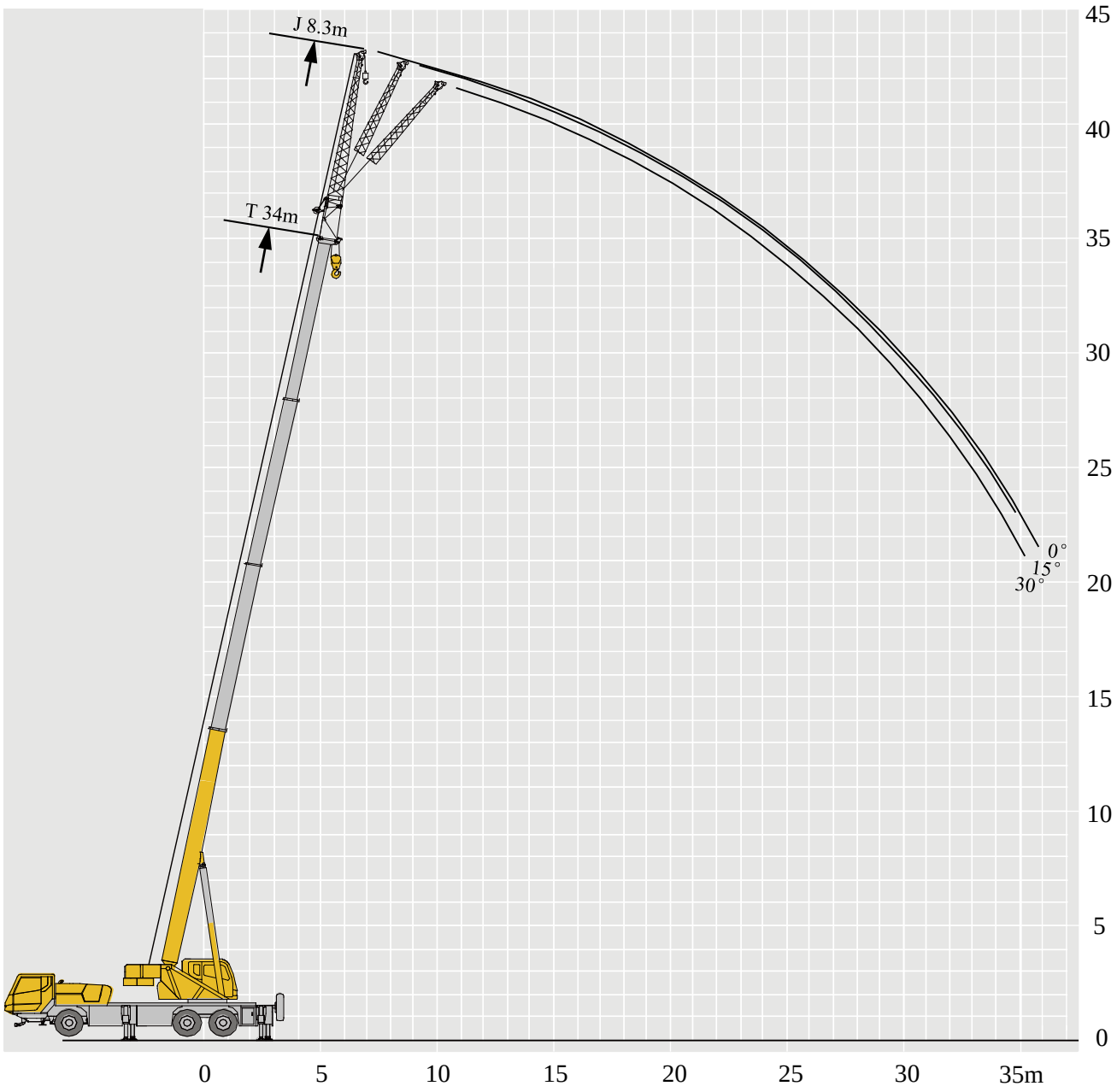
## Load charts

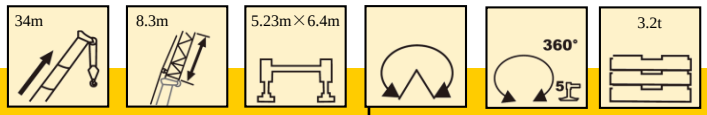
**T 10.6~34m**




| | 10.6 | 15.3 | 20.0 | 24.6 | 29.3 | 34 | |
|---|---|---|---|---|---|---|---|
| 3 | 25.0 | 16.0 | | | | | 3 |
| 3.5 | 23.0 | 16.0 | 16.0 | | | | 3.5 |
| 4 | 22.5 | 16.0 | 16.0 | 13.5 | | | 4 |
| 4.5 | 21.1 | 16.0 | 16.0 | 13.0 | | | 4.5 |
| 5 | 18.9 | 16.0 | 16.0 | 12.8 | 10.2 | | 5 |
| 5.5 | 17.0 | 16.0 | 15.2 | 12.5 | 9.9 | | 5.5 |
| 6 | 14.5 | 14.8 | 14.3 | 11.8 | 9.7 | 6.8 | 6 |
| 7 | 11.0 | 11.3 | 11.4 | 10.8 | 9.1 | 6.8 | 7 |
| 8 | 8.8 | 9.0 | 9.1 | 9.2 | 8.3 | 6.7 | 8 |
| 9 | | 7.4 | 7.6 | 7.6 | 7.7 | 6.3 | 9 |
| 10 | | 6.2 | 6.4 | 6.4 | 6.5 | 5.8 | 10 |
| 12 | | 4.6 | 4.7 | 4.8 | 4.8 | 4.8 | 12 |
| 14 | | | 3.7 | 3.7 | 3.7 | 3.7 | 14 |
| 16 | | | 2.8 | 2.9 | 3.0 | 3.0 | 16 |
| 18 | | | | 2.3 | 2.4 | 2.4 | 18 |
| 20 | | | | 1.9 | 1.9 | 2.0 | 20 |
| 22 | | | | 1.5 | 1.5 | 1.6 | 22 |
| 24 | | | | | 1.3 | 1.3 | 24 |
| 26 | | | | | 1.0 | 1.0 | 26 |

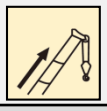
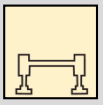
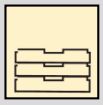
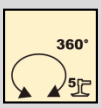

J 8.3m
T 34m
0°
15°
30°
45
40
35
30
25
20
15
10
5
0
0
5
10
15
20
25
30
35m




| | 0° | 15° | 30° | |
|---|---|---|---|---|
| 79 | 2.8 | 2 | 1.6 | 79 |
| 78 | 2.8 | 2 | 1.6 | 78 |
| 76 | 2.8 | 1.85 | 1.5 | 76 |
| 74 | 2.7 | 1.8 | 1.45 | 74 |
| 72 | 2.6 | 1.75 | 1.4 | 72 |
| 70 | 2.45 | 1.6 | 1.35 | 70 |
| 68 | 2.35 | 1.55 | 1.3 | 68 |
| 66 | 2.2 | 1.45 | 1.25 | 66 |
| 64 | 2.05 | 1.35 | 1.2 | 64 |
| 62 | 1.9 | 1.25 | 1.15 | 62 |
| 60 | 1.75 | 1.15 | 1.1 | 60 |
| 58 | 1.6 | 1.05 | 1.05 | 58 |
| 56 | 1.4 | 1 | 1 | 56 |
| 54 | 1.2 | 0.95 | 0.95 | 54 |
| 52 | 1.1 | 0.9 | 0.9 | 52 |
| 50 | 0.9 | 0.8 | 0.75 | 50 |
| 45 | 0.7 | 0.55 | 0.55 | 45 |
| 40 | 0.5 | 0.4 | 0.4 | 40 |
| 35 | 0.3 | 0.3 | 0.3 | 35 |
| 30 | 0.2 | | | 30 |

## Description of symbols

### General symbols

| | | | |
|---|---|---|---|
|  | Superstructure |  | Chassis |
|  | Lifting capacity |  | Axle |
|  | Boom length |  | Travel speed |
|  | Working radius |  | Grade ability |
|  | Boom angle |  | Tires |
|  | Boom lifting height |  | Outriggers |
|  | Fixed jib length |  | Hook block |
|  | Jib offset angle |  | Counterweight |
|  | Jib lifting height |  | Winch |
|  | Boom over side or over rear of the crane without 5th jack |  | With 5th jack down, 360° operation of the boom |

## Table of main technical parameters

| Category | Item | | Unit | Parameter |
|---|---|---|---|---|
| Dimensions | Dimensions (L×W×H) | | mm | 12520×2550×3400 |
| | Wheel base | | mm | 4425+1350 |
| | Track (front/rear) | | mm | 2026/1843 |
| | Front overhang/rear overhang | | mm | 2442/2435 |
| | Front extension/rear extension | | mm | 1508/360 |
| Weight | Max. permissible total weight | | kg | 26300 |
| | Axle load | Axle 1 | kg | 6600 |
| | | Axle 2 | kg | 98500 |
| | | Axle 3 | kg | 98500 |
| Power | Engine model | | —— | SC7H200G5E |
| | Rated power/rotation speed | | kW/(r/min) | 149/2200 |
| | Max. net power/rotation speed | | kW/(r/min) | 147/2200 |
| | Max. output torque/rotation speed | | N.m/(r/min) | 860/1400 |
| Travel | Max. travel speed | | km/h | ≥50 |
| | Min. stable travel speed | | km/h | 2～3 |
| | Min. turning diameter | | m | ≤21 |
| | Min. turning diameter at boom head | | m | 25 |
| | Min. ground clearance | | mm | 266 |
| | Approach angle | | ° | 16 |
| | Departure angle | | ° | 13 |
| | Braking distance (initial speed at 30 km/h) | | m | ≤10 |
| | Max. grade ability | | % | ≥32 |
| | Fuel consumption per 100 km | | L | 30 |

## Table of main technical parameters

| Category | Item | | | Unit | Parameter |
|---|---|---|---|---|---|
| Main performance | Max. rated lifting capacity | | | t | 25 |
| | Min. rated working radius | | | m | 3 |
| | Turning radius at turntable tail | At counterweight | | mm | 3425 |
| | | At auxiliary winch | | mm | — |
| | Max. load moment | Base boom | | kN.m | 930 |
| | | Fully-extended boom | | kN.m | 572 |
| | | Fully-extended boom + jib | | kN.m | 370 |
| | Outrigger span | Longitudinal | | m | 5.23 |
| | | Lateral | | m | 6.4 |
| | Lifting height | Basic boom | | m | 10.9 |
| | | Fully-extended boom | | m | 34.5 |
| | | Fully-extended boom + jib | | m | 43.2 |
| | Boom length | Base boom | | m | 10.6 |
| | | Fully-extended boom | | m | 34 |
| | | Fully-extended boom + jib | | m | 42.3 |
| | Jib offset angle | | | ° | 0, 15, 30 |
| Working speed | Time for raising boom | | | s | ≤35 |
| | Time for fully extending the boom | | | s | ≤53 |
| | Max. slewing speed | | | r/min | ≤2.6 |
| | Time for extending / retracting the outriggers | Outrigger beam | Retracting | s | ≤25 |
| | | | Extending | s | ≤35 |
| | | Outrigger jack | Retracting | s | ≤20 |
| | | | Extending | s | ≤40 |
| | Lifting speed (single line at 4th layer, no load) | Main winch | | m/min | ≥135 |
| | | Auxiliary winch | | m/min | ≥135 |

## Notes

1. This manual is for reference only, and all information is for illustration only. It should not be relied on to operate the crane. For correct crane operating instructions, please refer to the operation manual and rated lifting load manual.
2. The load capacity values in the tables are stated in t, which are the maximum total load capacity of the crane on a stable and even surface under the current boom length and radius, including the weight of hooks and riggings. The weight of the above devices must be subtracted during lifting operations.
3. The working radius is the horizontal gravity center distance of the load from the rotational axis of the crane superstructure measured at the ground.
4. Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if a load is not being carried.
5. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed of 14.1 m/s, wind pressure of 125N/$m^2$).

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