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ZOOMLION ZCT1500V633

TELESCOPIC BOOM CRAWLER CRANE

TECHNICAL SPECIFICATIONS

GQ0660922700000EN



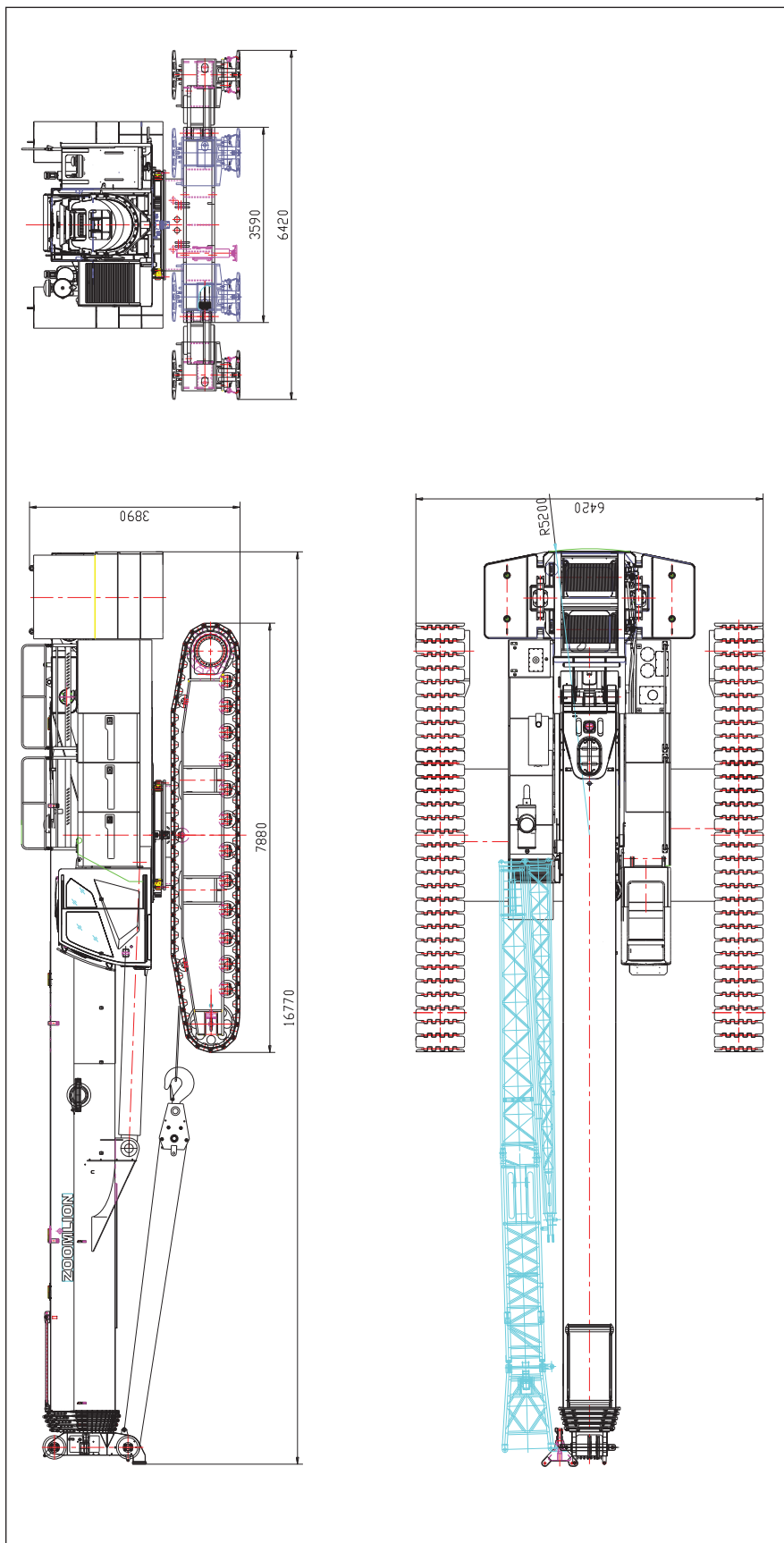
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1. Overall dimensions and main technical parameters

1.1. Overall dimensions



1. 2. Main technical parameters

Table – Main technical parameters

| Item | Unit | Value | Remarks |
|--|---------------------------------------|-------------------------|--|
| Max. lifting capacity | t | 150 | |
| Max. lifting moment | t×m | 533 | |
| Main boom length | m | 13.8-65 | |
| Jib length | m | 10.4-17.5 | |
| Max. length of main boom with fixed jib | m | 65+17.5 | |
| Main boom angle | ° | -1.5-82 | |
| Jib angle | ° | 0, 15, 30 | |
| Max. single rope speed of the main hoisting winch | m/min | 142 | Unloaded, the 4th drum layer |
| Max. single rope speed of the auxiliary hoisting winch. | m/min | 142 | Unloaded, the 4th drum layer |
| Boom derricking up time | s | 65 | |
| Slewing speed | rpm | 0-1.5 | |
| Traveling speed | km/h | 0-1.7 | |
| Max. gradeability | % | 40 | |
| Ground pressure | MPa | 0.09 | |
| Deadweight | t | 125 | With the main hook installed (excluding jib) |
| Counterweight | t | 28 | |
| Overall dimensions (L × W × H) | mm | 16770×6420(3600)×3890 | |
| Engine | Model | Weichai WP10G336E344 | Optional: QSL9-C280 |
| | Rated power / rotational speed | kW/rpm | 247/1900 209/2000 |
| | Max. output torque / rotational speed | Nm/rpm | 1550/(1100-1400) 1424/1500 |
| | Exhaust emission | / | Chinese National Stage III US Tier 3 |
| Distance between track center × crawler contact length × crawler width | mm | 2650×6500×900 | Crawler carrier retracted |
| | mm | 5520×6500×900 | Crawler carrier extended |

| | | | | |
|-------|---|----|------------|--|
| Noise | Noise level outside the operator's cab during operation | dB | ≤ 107 | |
| | Noise level in the operator's cab during operation | dB | ≤ 85 | |

Note:

1. The single rope speed of the winch, slewing speed and traveling speed vary with the load.
2. The ground pressure is an average value, and the actual maximum ground pressure should be determined according to actual lifting conditions.

1. 3. Main technical features

✦ Strong lifting capacity

The boom consists of 6 oval-shaped boom sections which can extend to a maximum length of 65 m, contributing to the crane's superior comprehensive lifting capacity and securing Zoomlion's leadership in the industry. The independently designed plate-type boom head and compact boom end realize optimal overlapping ratio as well as stronger lifting capacity of the main boom. The second generation of free boom telescoping technology, which is novel in the industry, increases stability during telescoping and brings the overall vehicle with higher anti-tipping capacity.

✦ High work efficiency

An electric proportional control joystick is installed in the crane, which is capable of compounding movements of the main and auxiliary winches, the derricking mechanism, the slewing mechanism and the telescoping mechanism, therefore greatly increasing the crane's lifting efficiency.

The crane is characterized in its convenient, flexible, stable and reliable operations which can be adjusted in a stepless way.

Single rope speed of the hoisting winch 1 and 2 can reach 142 m/min (at 4th layer on the drum).

✦ Stronger single wire rope pulling force

The main and auxiliary winches use a standard $\phi 22$ anti-twisting wire rope, whose single rope pulling force can reach 10.7 t.

✦ Optimization of transportation, assembly and dismantling

Easy for transfer between working sites; the whole vehicle can be transported in one truck after its counterweight is removed.

The movable counterweight plates can be installed and removed conveniently by a counterweight handle. Therefore they are also convenient for transportation.

The crawler carriers can be extended and retracted, and the maximum transport width of the crane is 3.6 m.

Vertical outriggers are installed to provide convenience during crawler carrier dismantling process.

1.4. Main boom and telescoping mechanism

The box-shaped main boom consists of 6 boom sections made of low-alloy high-strength steel plate, providing the boom with excellent bending-resistance capacity, superior load bearing capacity, light deadweight, large lateral stiffness and low end deflection.

The new plate-type boom head and compact boom end realize optimal overlapping ratio of adjacent boom sections. The boom head adopts an independently designed imbedded sliding block structure and a series of optimized designs, having the deadweight of the boom greatly decreased and the stress on the boom evenly distributed to avoid partial distortion. Furthermore, the boom has good guidance quality and adjustability.

A single cylinder pinning mechanism is installed to control boom telescoping movements. It is automatically controlled by a program to realize mechanical interlocking and telescoping in sequence.

1.5. Jib

The jib is consisted of two jib sections of variable cross-section structure, realizing superior force bearing performance. It is secured onto the first one through pins.

There are two jib lengths, i.e. 10.4 m and 17.5 m. The jib section I is hinged to the head of the top boom section through pins. The jib can be installed at one of the three angles onto the boom, i.e. 0°, 15° and 30°. Change of jib angles is realized conveniently through a rotary shaft and sliding groove.

1.6. Hoisting mechanism

It consists of a main hoist mechanism and an auxiliary hoist mechanism.

The two hoist mechanisms are driven by an axial plunger hydraulic motor with a built-in planetary gear reducer to lift or lower the hook.

A brake is fitted between the motor and reducer.

The two winch mechanisms can be controlled independently and also can carry out simultaneous movements.

The auxiliary hoist winch is of same model of the main winch, and both of them adopt a variable motor. The main winch is installed with an overlowering protection device which gives alarm when there are only 3 wraps of wire rope left on the drum.

The sealed-in planetary reducer is of a compact structure, light deadweight and high reliability.

Specifications for high-tensile torsion resistant hoist rope:

Diameter: $\varnothing 22.0$ mm

Strength grade: 1960 N/mm²

Length of main hoist rope: 320 m

Length of auxiliary hoist rope: 220 m

Single rope pulling force: 10.7 t

1.7. Derricking mechanism

A front-mounted derricking mechanism, single oil cylinder, enables the boom to derrick within -1.5° - 82° . A balance valve is installed in the cylinder to ensure stable derricking operations.

1.8. Slewing mechanism

The slewing mechanism consists of a hydraulic motor and planetary reducer. The dual-reducer slewing mechanism, and the slewing ring which is external engaged with the reducer, realizes large output torque and stable transmission of force.

The crane is capable of conducting controllable free swing during lifting operation where the crane is automatically aligned to the slewing center relative to the load.

A slewing cushion valve and a normally-closed brake are installed to ensure stable and reliable slewing.

1.9. Engine

Engine model: Weichai WP10G336E344 (optional: Cummins QSL9-C280)

Type: six-cylinder in-line, intercooling turbo-charged diesel engine

Rated power: 247kW/1900r/min (209/2000)

Max. torque: 1550N.m/1100-1400r/min (1424/1500)

Emission standard: Chinese National Stage III (US Tier 3)

Fuel tank capacity: 600L

1.10. Hydraulic system

The superstructure adopts an electro-hydraulic pilot proportionally controlled hydraulic system which is controlled by the integrated computer, therefore high operational comfort, sound fine and simultaneous movements are realized. The hydraulic system is a variable system combines open-type and close-type characteristics. Small hydraulic loss, high working efficiency and movement accuracy, stable and reliable operations and stepless speed adjustment are assured. A counterweight handling system and a cab tilting mechanism are also installed. Stable startup and braking performance and high system reliability are assured.

The oil cooler for hydraulic system: a radiator driven by a high-power hydraulic motor, 47 kW

Hydraulic oil tank capacity: 1000 L

1.11. Electrical system

24 Volt DC, negative ground, two batteries of 200AH each.

The electrical system of the crane includes the power supply, engine start, engine shutdown, indicator lights, warning devices, illumination devices, fan, wiper, horn, hoisting limiter, hydraulic oil cooling fan, concentrated display panel, load moment limiter, safety devices etc. which not only ensure safe operation of the crane but also provide a good working environment.

Modular design, CAN bus control technology and gateway design are adopted for the electrical system, realizing clear and simple system architecture and convenience and easy maintenance. Each control unit can not only work independently to control its executive mechanism, but also communicate in real-time through the CAN bus network with gateways, therefore ensuring accurate, synchronous, safe and reliable electric control. Conventional switches, joystick and indicator light boards are replaced by integrated control pane, joysticks and indicator light panels controlled by CAN bus, which greatly reduces number of wiring and connectors and enhances system reliability. The conventional low gear switch is replaced by a stepless rotary switch, which improves fine movements and realizes more convenient and accurate operations.

The load moment limiter and 10.4-inch large monitor screen can effectively monitor all parameters related to working status, and analyze them to provide necessary pre-alarms, alarms or actively cut off dangerous movement to ensure working safety.

1.12. Counterweight

A hanging counterweight system installed with movable counterweight plates, whose total weight is 40 t.

The movable counterweight plates are installed and removed through the counterweight handler installed at the tail of the slewing platform. They are stacked up and convenient for transportation.

There are two fixed balancing counterweight plates, whose total weight is 7 t.

1.13. Operator's cab

The spacious and full-closed cab is equipped with a safety windshield glass, an adjustable seat with armrest and headrest, an intermittent wiper and a window water injector, and covered with soft interior materials. It can be tilted upward or downward.

☛ Control boxes

The control boxes on both side of the cab are installed with various electrical switches and an emergency stop button, etc. They can be adjusted with the operator's seat.

☛ Joysticks and travel gear pedals

The hydraulic control system consists of two joysticks located in left and right side of the operator's seat and three travel gear pedals. These joysticks and pedals control movements of main valves through pilot hydraulic oils.

The left joystick controls the slewing mechanism and the auxiliary winch;

The right joystick controls the derricking mechanism and the main winch;

The pedals control telescoping and left/right crane travelling.

Multiple movements can be compounded.

✦ Air conditioning

Adopts a standard heating and cooling air conditioning system, and optimizes air duct and air outlet.

1. 14. Crane undercarriage

✦ Traveling power

Both left and right crawler carriers are fitted with an independent hydraulic driving system. Each hydraulic driving system has a hydraulic motor, which can drive the drive sprocket via a planet reducer.

The operator can use the joystick or travel gear pedals to control traveling movements, such as traveling straight ahead / backwards, turning with a crawler, differential steering and turning on spot.

✦ Traveling brake

The travel gear can be braked via the spring on the traveling motor, which is controlled by a balance valve.

✦ Crawler carrier extending & retracting mechanism

Crawler carriers are extended and retracted via two hydraulic cylinders.

- Crawler carrier extended:

Distance between track centers: 5520 mm

- Crawler carrier retracted:

Distance between track centers: 2650 mm

✦ Track roller

A maintenance-free, sealed structure

✦ Track pad

A high-strength alloy cast steel track pad, its width: 900 mm.

✦ Traveling speed

The highest traveling speed is 1.7 km/h.

1.15. Safety devices

Many safety devices, including mechanical, electronic or hydraulic ones, are fitted on the crane to ensure safe operations.

⊗ Load moment limiter

The load moment limiter can automatically detect a boom angle and lifting load, and provide feedback of these data to the operator according to actual lifting situation.

When the normal operating range of the crane is exceeded, the load moment limiter will send out an alarm and limit current movement.

The LCD screen can show the following data: moment ratio, main boom angle, main boom length, working radius, actual load, and permissible lifting load, etc.

⊗ Hoisting limit switch

A hoisting height limit switch with a limit switch weight is installed on the top of the main boom section. It is used to prevent the hook from being lifted to the upper limit position. When the hook reaches the upper limit position, the limit switch is triggered and sends a signal to the crane's electrical system, which will cut off further lifting of the hook and trigger visual and acoustic alarm in the cab through a buzzer and an alarm indicator.

⊗ Lowering limit switch

When there are only three wraps of wire rope left on the drum, the lowering limit switch will be triggered, the buzzer will ring, the warning light on the screen will flash and the crane movement "reel off winch" will be cut off.

⊗ Slewing locking device

It adopts both electrical and mechanical locking, generally used to fix the relative position between the superstructure and undercarriage during transportation, so as to avoid accidental misoperation.

⊗ Safety catch

A device to protect the lifted load from falling off from the hook

⊗ Anemometer

An electronic wind speed sensor to indicate actual wind speed at the boom/jib head to the crane operator

⊗ Rear-view mirror

Located in the left front of the cab, and near the handrail in the right hood

✦ Overflow valves in hydraulic system

The overflow valve fitted in the hydraulic system can restrain pressure in oil circuits from rising irregularly, thus protecting such hydraulic elements as the hydraulic oil pump and hydraulic motor against damage and the hydraulic system from being overloaded.

✦ Emergency stop button

It allows the engine to be shut down and all movements to be stopped in an emergency situation.

✦ Tricolor warning light

The warning light, by illuminating in red, yellow or green color, can indicate different loading status.

- Green color – the load ratio is less than 90%
- Yellow color – the load ratio is between 90% and 100%
- Red color – the load ratio has exceeded 100% and the crane is overloaded.

✦ Slewing alarm

An acoustic alarm will be sent out during slewing movements.

✦ Traveling alarm

An acoustic alarm will be sent out during traveling movements.

✦ Video monitoring system (optional)

A camera and a visual monitoring system are optional. They respectively monitor working conditions of the crane's hoisting winches and the blind spots behind the crane.

2. Work conditions and rated capacity charts

2.1. Working range

2.1.1 Lifts with the boom only

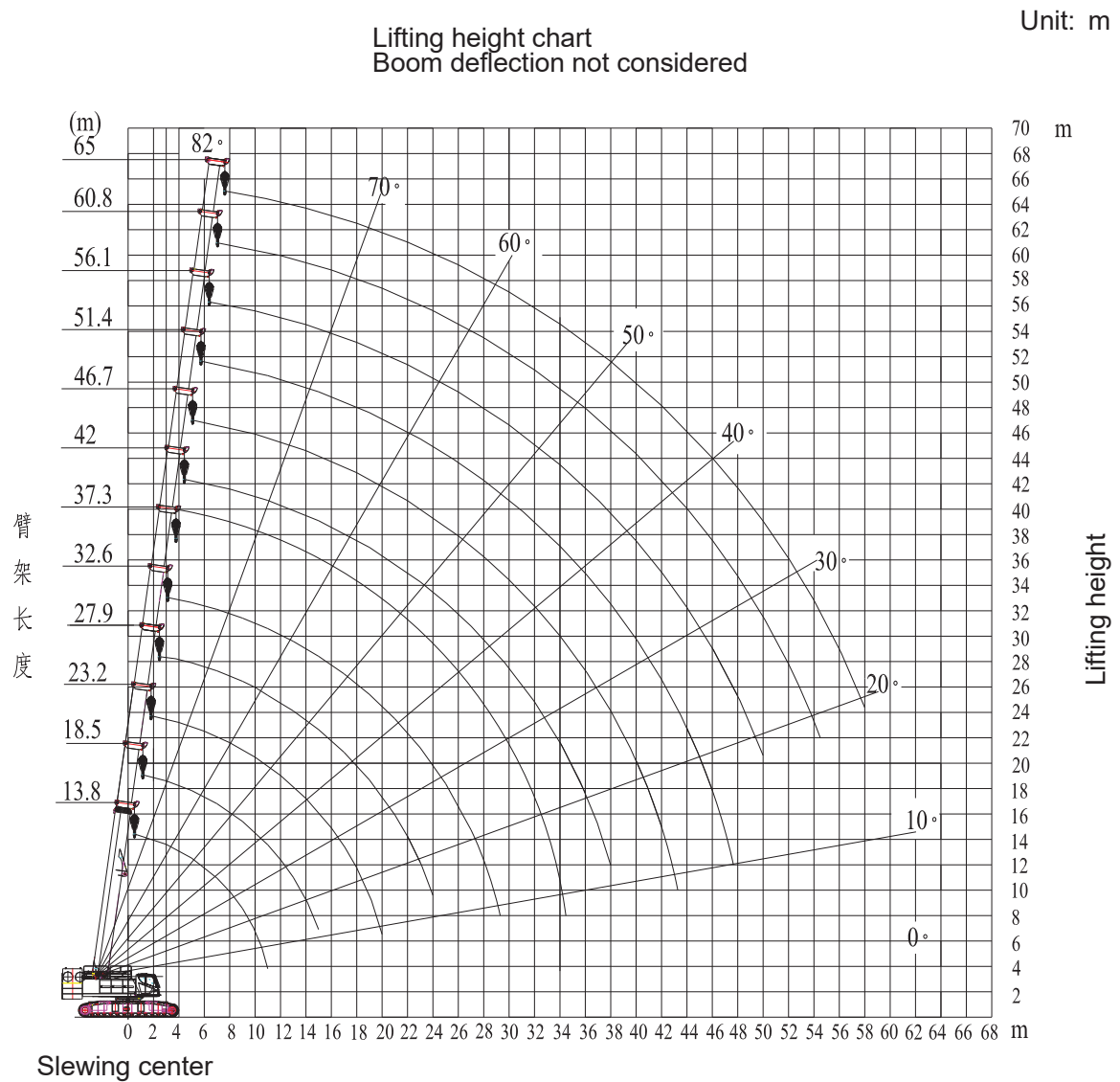


Figure 2-1 Lifting height chart

2.1.2 Lifts with boom and jib

2.1.2.1 Boom + 10.4m jib

Unit: m

Lifting height chart (60.8m boom + 10.4 m jib)
 Boom deflection not considered

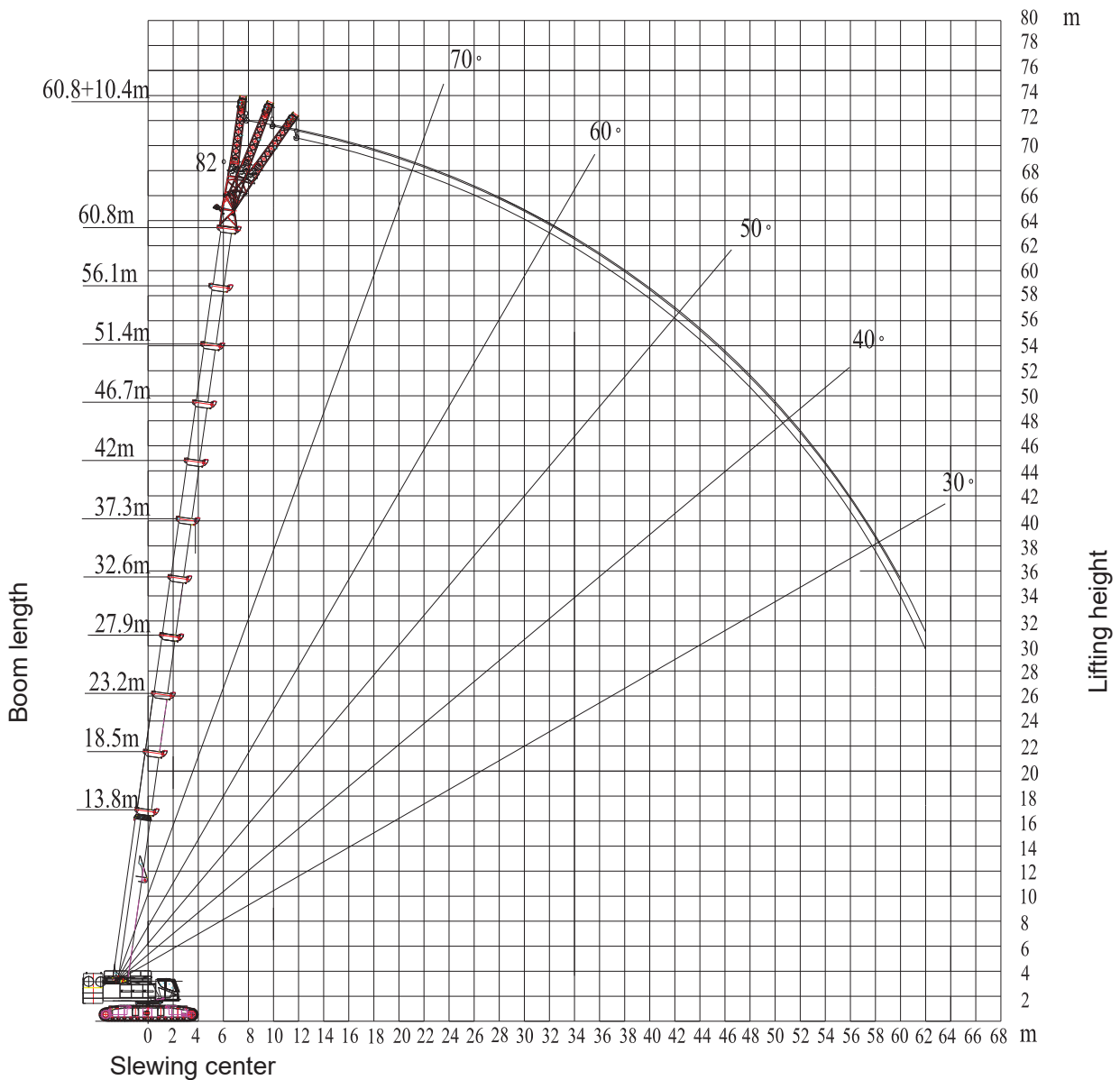


Figure 2-2 Lifting height chart

Lifting height chart (65m boom + 10.4 m jib)
 Boom deflection not considered

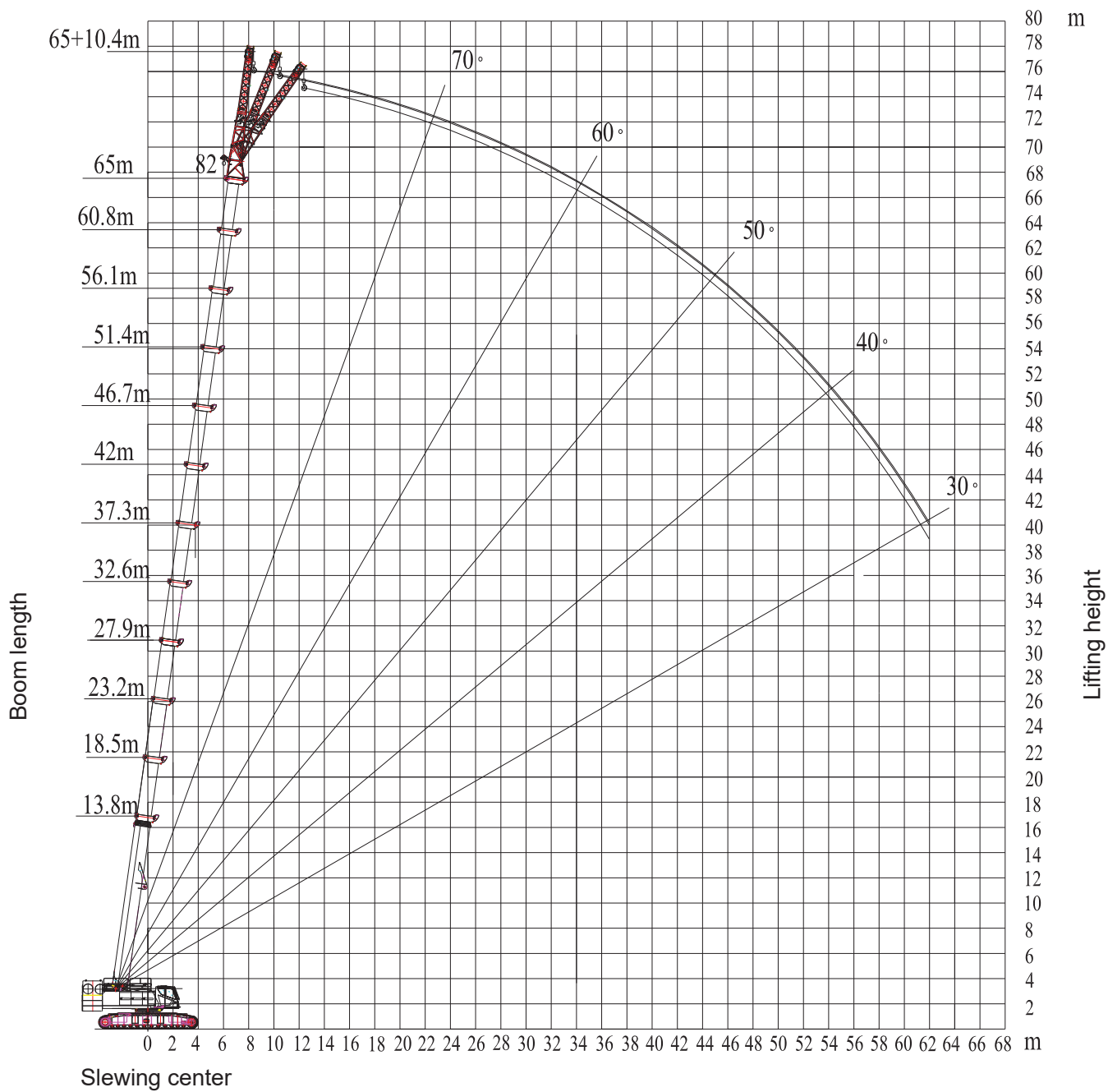


Figure 2-3 Lifting height chart

2.1.2.2 Boom + 17.5m jib

Lifting height chart (60.8m boom + 17.5 m jib)
 Boom deflection not considered

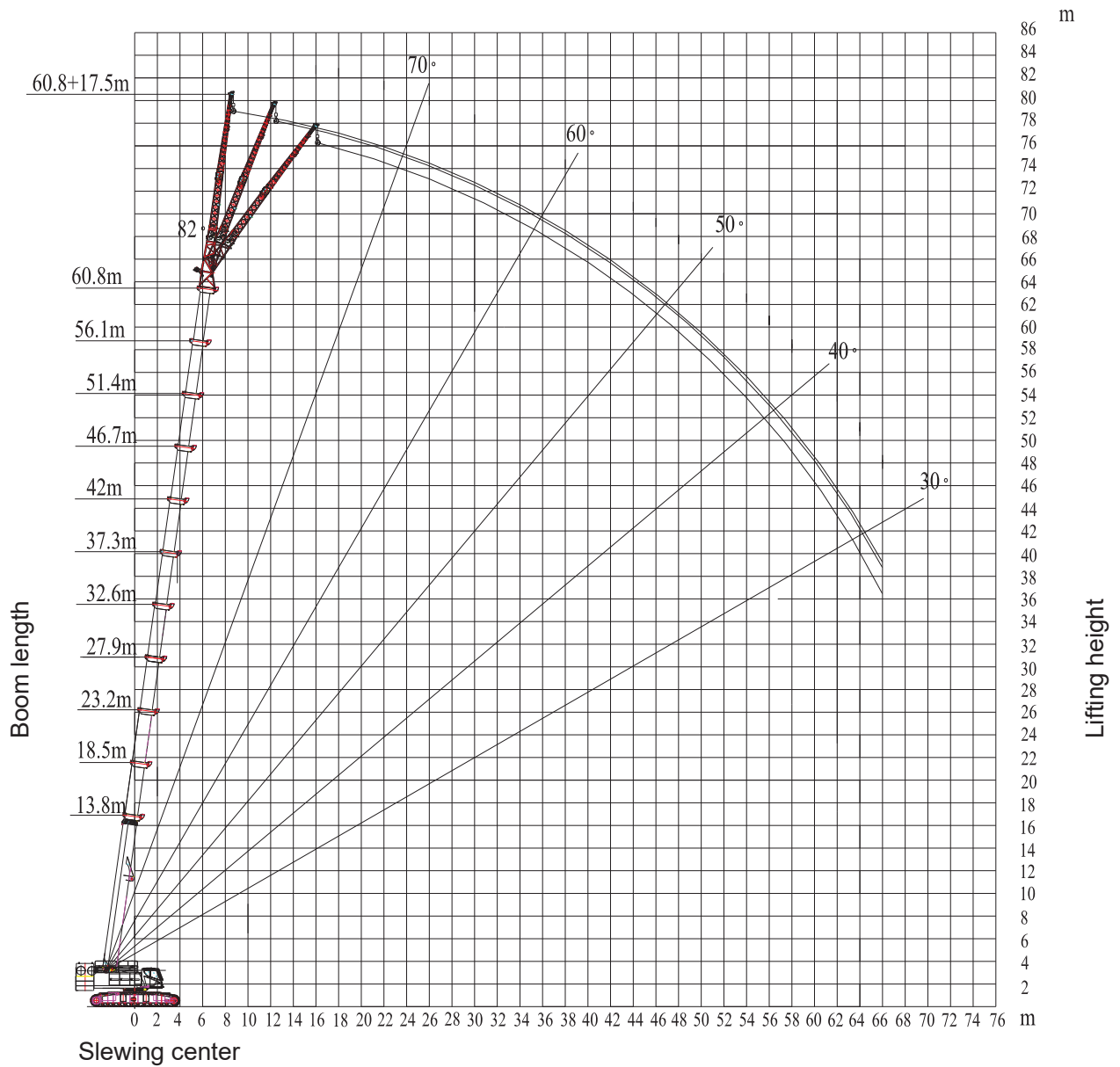


Figure 2-4 Lifting height chart

Lifting height chart (65m boom + 17.5 m jib)
 Boom deflection not considered

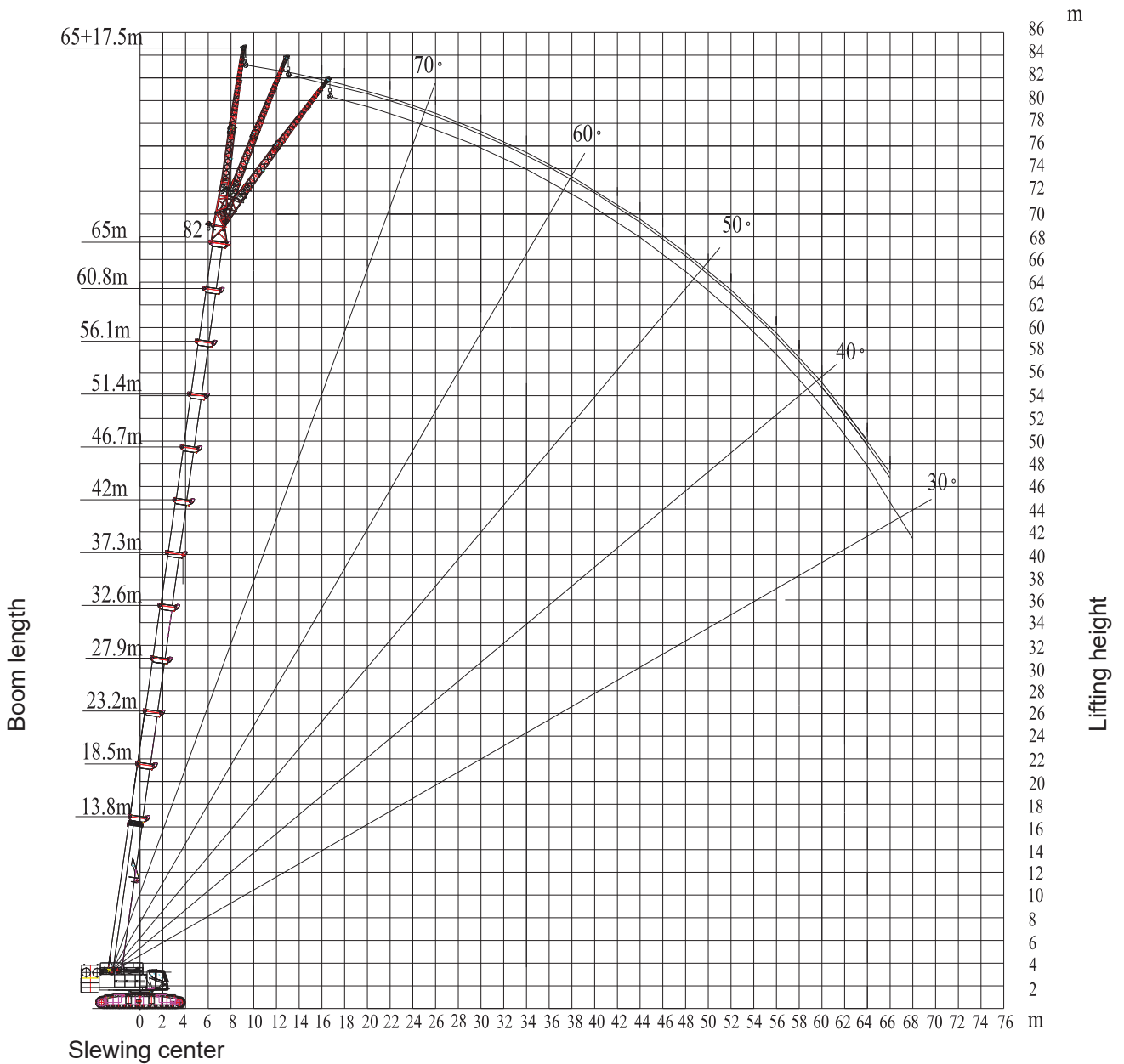


Figure2-5 Lifting height chart

2.1.2.3 Boom + 4.9m tip boom

Lifting height chart (boom + tip boom)
 Boom deflection not considered

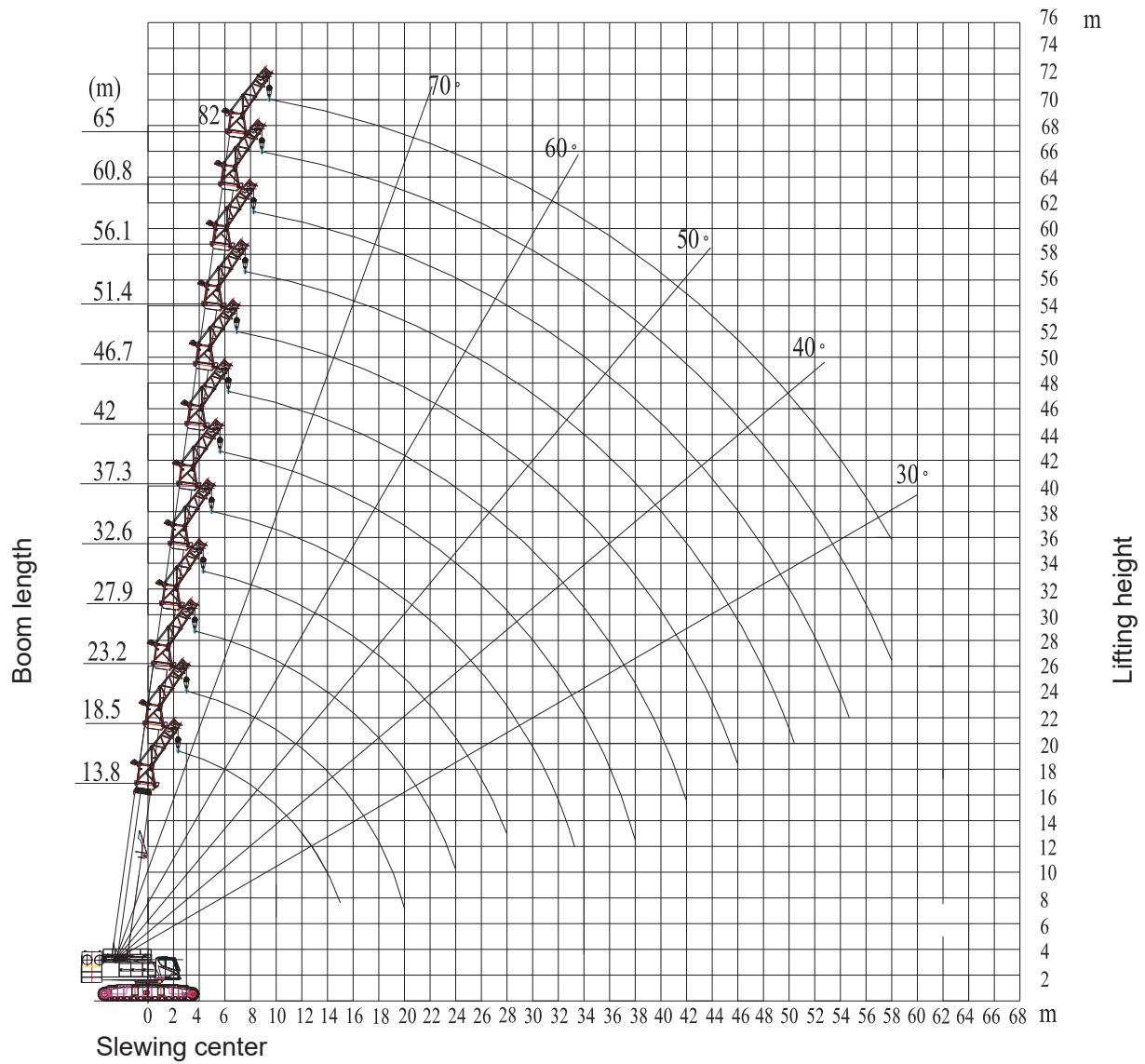


Figure2-6 Lifting height chart

2.2. Rated lifting capacity with boom

Table 2-2 Rated capacity with boom

Unit: t

| Over 360° working range, with 40t counterweight and 7t balance weight, with crawler carrier fully extended | | | | | | | | | | | | | | |
|--|----------|-------|------|------|------|-------|----------------|------|------|------|-----------|------|--------------------|-----|
| Working radius (m) | Boom (m) | | | | | | Crane gradient | | | | | | Working radius (m) | |
| | 13.8★ | 18.5★ | 18.5 | 18.5 | 18.5 | 23.2★ | 23.2 | 23.2 | 23.2 | 23.2 | 27.9★ | 27.9 | | |
| | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | | |
| 2.5 | 150 | | | | | | | | | | | | 2.5 | |
| 3 | 135 | 115 | 53.5 | 105 | 105 | | | | | | | | 3 | |
| 3.5 | 130 | 110 | 51 | 98 | 98 | 105 | 26 | 103 | 55 | 76 | | | 3.5 | |
| 4 | 120 | 107 | 48 | 90 | 90 | 100 | 25 | 96 | 53 | 72 | 85 | 28 | 4 | |
| 4.5 | 110 | 100 | 46 | 85 | 85 | 90 | 24 | 90 | 50 | 67 | 85 | 26 | 4.5 | |
| 5 | 100 | 96 | 44 | 80 | 80 | 88 | 23 | 88 | 48 | 63 | 82 | 25 | 5 | |
| 5.5 | 90 | 89 | 42 | 75 | 75 | 82 | 21.5 | 82 | 46 | 60 | 78 | 24 | 5.5 | |
| 6 | 85 | 81 | 40 | 72 | 72 | 78 | 20.5 | 78 | 45 | 56 | 75 | 23 | 6 | |
| 6.5 | 82 | 75 | 38.5 | 68 | 68 | 75 | 19.5 | 75 | 43 | 53 | 70 | 22 | 6.5 | |
| 7 | 74 | 70 | 37 | 66 | 66 | 70 | 18.5 | 70 | 40 | 50 | 62 | 21 | 7 | |
| 8 | 62 | 62 | 35 | 60 | 60 | 62 | 17 | 60 | 39 | 46 | 58 | 19 | 8 | |
| 9 | 53 | 54 | 32.5 | 50 | 50 | 50 | 16 | 49 | 36 | 42 | 55 | 18 | 9 | |
| 10 | 45 | 45 | 30.5 | 42 | 42 | 42 | 15 | 41 | 34 | 40 | 47 | 17 | 10 | |
| 11 | 38 | 39 | 29 | 36 | 36 | 35 | 14 | 36 | 33 | 36 | 40 | 16 | 11 | |
| 12 | | 33 | 27.5 | 31 | 31 | 31 | 13 | 32 | 30 | 32 | 34 | 15 | 12 | |
| 13 | | 30 | 26 | 28 | 28 | 27 | 12 | 28 | 29 | 28 | 30 | 14 | 13 | |
| 14 | | 26 | 25 | 25 | 25 | 25 | 11.5 | 25 | 26 | 25 | 26 | 13.5 | 14 | |
| 15 | | 23 | 23 | 22 | 22 | 23 | 11 | 22 | 23 | 22 | 23 | 13 | 15 | |
| 16 | | | | | | 20 | 10.5 | 20 | 21 | 20 | 20 | 12 | 16 | |
| 18 | | | | | | 16 | 9.5 | 17 | 18 | 17 | 17 | 11 | 18 | |
| 20 | | | | | | 13 | 9 | 14 | 15 | 14 | 14 | 10.5 | 20 | |
| 22 | | | | | | | | | | | 12 | 9.5 | 22 | |
| 24 | | | | | | | | | | | 10 | 9 | 24 | |
| 26 | | | | | | | | | | | | | 26 | |
| 28 | | | | | | | | | | | | | 28 | |
| 30 | | | | | | | | | | | | | 30 | |
| 32 | | | | | | | | | | | | | 32 | |
| 34 | | | | | | | | | | | | | 34 | |
| 36 | | | | | | | | | | | | | 36 | |
| 38 | | | | | | | | | | | | | 38 | |
| 40 | | | | | | | | | | | | | 40 | |
| 42 | | | | | | | | | | | | | 42 | |
| 44 | | | | | | | | | | | | | 44 | |
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| 50 | | | | | | | | | | | | | 50 | |
| 52 | | | | | | | | | | | | | 52 | |
| 54 | | | | | | | | | | | | | 54 | |
| 56 | | | | | | | | | | | | | 56 | |
| 58 | | | | | | | | | | | | | 58 | |
| Reeving | 14 | 12 | | | 12 | 11 | | | 11 | 9 | | | Reeving | |
| Main hook | 150t | 110t | | | 110t | | | 110t | | | Main hook | | | |
| Telescope mode | I | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | I |
| | II | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | II |
| | III | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | III |
| | IV | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | IV |
| | V | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | 3 | V |

Table 2-3 Rated capacity with boom

Unit: t

| Over 360° working range, with 40t counterweight and 7t balance weight, with crawler carrier fully extended | | | | | | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|----------|-----------|----------------|-----------|-------|------|-----------|-----------|--------------------|-----|
| Working radius (m) | Boom (m) | | | | | | Crane gradient | | | | | | Working radius (m) | |
| | 27.9 | 27.9 | 27.9 | 32.6★ | 32.6 | 32.6 | 32.6 | 32.6 | 37.3★ | 37.3 | 37.3 | 37.3 | | |
| | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | |
| 2.5 | | | | | | | | | | | | | 2.5 | |
| 3 | | | | | | | | | | | | | 3 | |
| 3.5 | | | | | | | | | | | | | 3.5 | |
| 4 | 82 | 57 | 32 | | | | | | | | | | 4 | |
| 4.5 | 78 | 55 | 30 | 78 | 26 | 58 | 37 | 32 | | | | | 4.5 | |
| 5 | 73 | 53 | 29 | 78 | 25 | 58 | 35 | 30 | 60 | 26 | 32 | 38 | 5 | |
| 5.5 | 70 | 51 | 27 | 75 | 23 | 55 | 33 | 29 | 60 | 25 | 30 | 36 | 5.5 | |
| 6 | 66 | 50 | 25 | 70 | 22 | 53 | 31 | 28 | 58 | 24 | 28 | 34 | 6 | |
| 6.5 | 63 | 47 | 24 | 68 | 21 | 52 | 30 | 26 | 58 | 23 | 26 | 32 | 6.5 | |
| 7 | 60 | 45 | 23 | 65 | 20 | 50 | 28 | 25 | 58 | 22 | 25 | 31 | 7 | |
| 8 | 55 | 41 | 21 | 60 | 18 | 48 | 26 | 23 | 55 | 20 | 23 | 28 | 8 | |
| 9 | 50 | 37 | 19 | 53 | 17 | 43 | 24 | 22 | 50 | 18 | 22 | 26 | 9 | |
| 10 | 42 | 34 | 18 | 45 | 16 | 40 | 22 | 20 | 45 | 17 | 20 | 24 | 10 | |
| 11 | 36 | 32 | 16 | 38 | 15 | 36 | 20 | 19 | 40 | 16 | 18 | 22 | 11 | |
| 12 | 32 | 30 | 15 | 34 | 14 | 32 | 19 | 18 | 35 | 15 | 17 | 21 | 12 | |
| 13 | 28 | 28 | 14 | 30 | 13 | 27 | 18 | 16 | 31 | 14 | 16 | 20 | 13 | |
| 14 | 25 | 26 | 13 | 26 | 12 | 25 | 17 | 15 | 27 | 13 | 15 | 18 | 14 | |
| 15 | 22 | 24 | 12.5 | 24 | 11 | 22 | 16 | 14.5 | 24 | 12 | 14 | 17 | 15 | |
| 16 | 20 | 21 | 12 | 22 | 11 | 20 | 15 | 14 | 22 | 11 | 13 | 16 | 16 | |
| 18 | 17 | 18 | 11 | 18 | 9.5 | 17 | 13 | 12 | 19 | 10 | 12 | 14 | 18 | |
| 20 | 14 | 15 | 10 | 15 | 8.8 | 14 | 12 | 11.5 | 16 | 9.5 | 11 | 13 | 20 | |
| 22 | 12 | 13 | 9 | 12 | 8 | 12 | 11 | 10.5 | 13 | 9 | 10 | 12 | 22 | |
| 24 | 10 | 12 | 8 | 10 | 7 | 11 | 10 | 10 | 11 | 8.2 | 9 | 11 | 24 | |
| 26 | | | | 9 | 6.5 | 9 | 9 | 9 | 10 | 7.7 | 8 | 10 | 26 | |
| 28 | | | | 8 | 6 | 8 | 8.5 | 8 | 9 | 7 | 7.5 | 8 | 28 | |
| 30 | | | | 7 | 5.5 | 7 | 7 | 7 | 8 | 6.5 | 7 | 7.5 | 30 | |
| 32 | | | | | | | | | 7 | 6 | 6.5 | 7 | 32 | |
| 34 | | | | | | | | | | 5.5 | 6 | 6 | 34 | |
| 36 | | | | | | | | | | | | | 36 | |
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| 52 | | | | | | | | | | | | | 52 | |
| 54 | | | | | | | | | | | | | 54 | |
| 56 | | | | | | | | | | | | | 56 | |
| 58 | | | | | | | | | | | | | 58 | |
| Reeving | 9 | | | 8 | 8 | | | | 7 | | | | Reeving | |
| Main hook | 110t | | | | 110t | | | | 60t | | | | Main hook | |
| Telescope mode | I | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | I |
| | II | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | II |
| | III | 2 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | III |
| | IV | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | IV |
| | V | 1 | 2 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | V |

Table 2-4 Rated capacity with boom

Unit: t

| Over 360° working range, with 40t counterweight and 7t balance weight, with crawler carrier fully extended | | | | | | | | | | | | | | | | |
|--|-----------|-----------|------------|------|-------------|-----------|----------------|-----------|-----------|-------------|-----------|------------|--------------------|-----|----------------|-----------|
| Working radius (m) | Boom (m) | | | | | | Crane gradient | | | | | | Working radius (m) | | | |
| | 37.3 | 42★ | 42 | 42 | 42 | 42 | 46.7★ | 46.7 | 46.7 | 46.7 | 51.4★ | 51.4 | | | | |
| | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | 0° | | | | |
| 2.5 | | | | | | | | | | | | | | 2.5 | | |
| 3 | | | | | | | | | | | | | | 3 | | |
| 3.5 | | | | | | | | | | | | | | 3.5 | | |
| 4 | | | | | | | | | | | | | | 4 | | |
| 4.5 | | | | | | | | | | | | | | 4.5 | | |
| 5 | 48 | | | | | | | | | | | | | 5 | | |
| 5.5 | 45 | | | | | | | | | | | | | 5.5 | | |
| 6 | 43 | 50 | 25 | 43 | 30 | 36 | | | | | | | | 6 | | |
| 6.5 | 40 | 47 | 24 | 41 | 29 | 35 | | | | | | | | 6.5 | | |
| 7 | 39 | 45 | 23 | 39.4 | 28 | 34 | | 25 | 35 | | | | | 7 | | |
| 8 | 36 | 42 | 21 | 36.2 | 25.7 | 31 | 37 | 24 | 33 | 28 | | | | 8 | | |
| 9 | 33 | 38 | 20 | 33.5 | 24 | 29 | 35 | 22 | 30.7 | 26 | 31 | 23 | | 9 | | |
| 10 | 30 | 36 | 18 | 31 | 22 | 27 | 33 | 20.5 | 29 | 24.3 | 30.5 | 21.8 | | 10 | | |
| 11 | 28 | 32 | 17 | 28.9 | 20.5 | 25 | 30.5 | 19.4 | 27 | 22.8 | 28.5 | 20.7 | | 11 | | |
| 12 | 26 | 30 | 16 | 27 | 19.2 | 23.6 | 28.8 | 18 | 25.5 | 21.4 | 27.5 | 19.6 | | 12 | | |
| 13 | 25 | 28 | 15 | 25.4 | 18 | 22 | 27 | 17 | 24 | 20.2 | 26 | 18.7 | | 13 | | |
| 14 | 23 | 26 | 14 | 23.9 | 17 | 21 | 25.5 | 16 | 22.7 | 19 | 24.5 | 17.6 | | 14 | | |
| 15 | 22 | 24 | 13 | 22.5 | 16 | 19.8 | 24.3 | 15.2 | 21.5 | 18 | 23 | 16.8 | | 15 | | |
| 16 | 20 | 22 | 12 | 21.3 | 15 | 18.7 | 22 | 14.3 | 20 | 17 | 22 | 16 | | 16 | | |
| 18 | 17 | 18 | 11 | 18.6 | 13.5 | 17 | 18 | 13 | 18 | 15.5 | 18 | 14.5 | | 18 | | |
| 20 | 14.5 | 15 | 10 | 15.8 | 12.3 | 15.4 | 15 | 11.5 | 14.5 | 14 | 15 | 13 | | 20 | | |
| 22 | 12.7 | 13 | 9 | 13.5 | 11.2 | 14 | 12.8 | 10.5 | 12.5 | 12.8 | 12.8 | 12 | | 22 | | |
| 24 | 11 | 11 | 8 | 11 | 10 | 12.4 | 10.8 | 9.7 | 11 | 11.8 | 11 | 11 | | 24 | | |
| 26 | 9.5 | 9 | 7.8 | 9.7 | 9.3 | 10.7 | 9.3 | 9 | 9.5 | 10.9 | 10 | 10 | | 26 | | |
| 28 | 8 | 8.6 | 7.3 | 8.5 | 8.7 | 9.6 | 8 | 8.3 | 8.2 | 10 | 8.5 | 9.5 | | 28 | | |
| 30 | 7 | 7.5 | 6.8 | 7.5 | 8 | 8.5 | 7 | 7.6 | 7.2 | 8 | 7.5 | 8.8 | | 30 | | |
| 32 | 6.5 | 6.5 | 6.3 | 6.5 | 7.4 | 7.5 | 6.2 | 7 | 6.3 | 7 | 6.5 | 8.2 | | 32 | | |
| 34 | 6 | 5.7 | 5.9 | 5.5 | 6.9 | 6.7 | 5.4 | 6.6 | 5.6 | 6.4 | 5.5 | 6.7 | | 34 | | |
| 36 | | 4.8 | 5.5 | 5 | 6.4 | 6 | 4.7 | 6.2 | 5 | 5.7 | 5 | 6.2 | | 36 | | |
| 38 | | 4 | 5 | 4.5 | 5.5 | 5 | 4 | 5.8 | 4.4 | 5.1 | 4.3 | 5.5 | | 38 | | |
| 40 | | | | | | | 3.5 | 5.4 | 3.8 | 4.6 | 3.5 | 5 | | 40 | | |
| 42 | | | | | | | 3 | 5.1 | 3.4 | 4.1 | 3 | 4.5 | | 42 | | |
| 44 | | | | | | | 2.5 | 4.2 | 3 | 3.7 | 2.9 | 4 | | 44 | | |
| 46 | | | | | | | | | | | 2.4 | 3.6 | | 46 | | |
| 48 | | | | | | | | | | | 2 | 3.3 | | 48 | | |
| 50 | | | | | | | | | | | | | | 50 | | |
| 52 | | | | | | | | | | | | | | 52 | | |
| 54 | | | | | | | | | | | | | | 54 | | |
| 56 | | | | | | | | | | | | | | 56 | | |
| 58 | | | | | | | | | | | | | | 58 | | |
| Reeving | 7 | 5 | | | 5 | | | 4 | | | 4 | | | 3 | Reeving | |
| Main hook | 60t | | | | | | 60t | | | | | | 60t | | | Main hook |
| Telescope mode | I | 1 | 3 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 3 | 1 | I | Telescope mode | |
| | II | 3 | 2 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | II | | |
| | III | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | III | | |
| | IV | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | IV | | |
| | V | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | | V |

Table 2-5 Rated capacity with boom

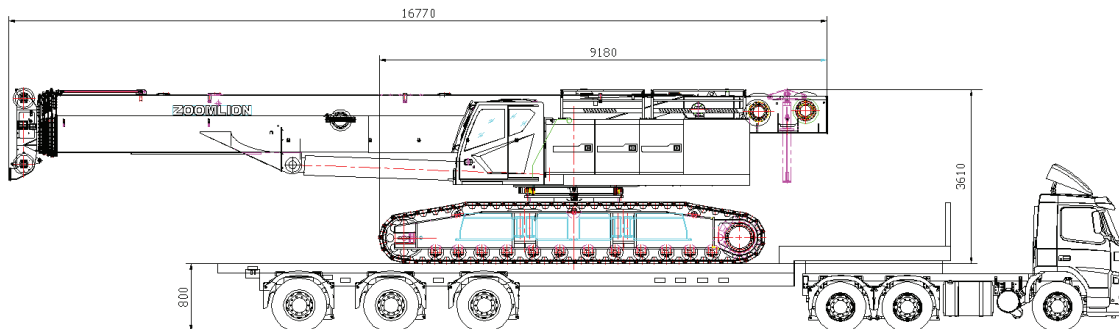
Unit: t

| Over 360° working range, with 40t counterweight and 7t balance weight, with crawler carrier fully extended | | | | | | | |
|--|----------|-------|------|----------------|------|--------------------|----------------|
| Working radius (m) | Boom (m) | | | Crane gradient | | Working radius (m) | |
| | 51.4 | 56.1★ | 56.1 | 60.8★ | 65★ | | |
| | 0° | 0° | 0° | 0° | 0° | | |
| 2.5 | | | | | | 2.5 | |
| 3 | | | | | | 3 | |
| 3.5 | | | | | | 3.5 | |
| 4 | | | | | | 4 | |
| 4.5 | | | | | | 4.5 | |
| 5 | | | | | | 5 | |
| 5.5 | | | | | | 5.5 | |
| 6 | | | | | | 6 | |
| 6.5 | | | | | | 6.5 | |
| 7 | | | | | | 7 | |
| 8 | | | | | | 8 | |
| 9 | 27 | | | | | 9 | |
| 10 | 26 | 25 | 23 | | | 10 | |
| 11 | 24 | 25 | 22 | | | 11 | |
| 12 | 23 | 24 | 20.5 | 20 | | 12 | |
| 13 | 21.7 | 23 | 19.7 | 19 | | 13 | |
| 14 | 20.5 | 22 | 18.9 | 18.5 | 15.5 | 14 | |
| 15 | 19.5 | 21 | 18 | 18 | 15.2 | 15 | |
| 16 | 18.5 | 20 | 17 | 17.5 | 15 | 16 | |
| 18 | 17 | 18 | 15.6 | 15.8 | 14.5 | 18 | |
| 20 | 15.4 | 15.5 | 14.3 | 14.7 | 14 | 20 | |
| 22 | 14 | 13 | 13.2 | 13.2 | 13.5 | 22 | |
| 24 | 11.2 | 11 | 12.2 | 11.4 | 12 | 24 | |
| 26 | 9.7 | 10 | 11.2 | 10 | 10 | 26 | |
| 28 | 8.6 | 8.5 | 8.9 | 8.8 | 9 | 28 | |
| 30 | 7.6 | 7.5 | 7.9 | 7.7 | 8 | 30 | |
| 32 | 6.7 | 6.5 | 7 | 6.8 | 7.3 | 32 | |
| 34 | 6 | 6 | 6.2 | 6.1 | 6.5 | 34 | |
| 36 | 5.3 | 5.2 | 5.6 | 5.4 | 5.5 | 36 | |
| 38 | 4.7 | 4.5 | 5 | 4.8 | 5 | 38 | |
| 40 | 4.2 | 4 | 4.5 | 4.2 | 4.5 | 40 | |
| 42 | 3.7 | 3.5 | 4 | 3.7 | 4 | 42 | |
| 44 | 3.3 | 3 | 3.6 | 3.2 | 3.5 | 44 | |
| 46 | 2.9 | 2.5 | 3.2 | 2.8 | 3 | 46 | |
| 48 | 2.5 | 2.3 | 2.8 | 2.5 | 2.7 | 48 | |
| 50 | | 2 | 2.5 | 2.1 | 2.4 | 50 | |
| 52 | | | | 1.8 | 2 | 52 | |
| 54 | | | | 1.6 | 1.7 | 54 | |
| 56 | | | | 1.3 | 1.4 | 56 | |
| 58 | | | | | 1.2 | 58 | |
| Reeving | | 3 | | | | | Reeving |
| Main hook | 60t | 25t | | | | Main hook | |
| Telescope mode | I | 2 | 3 | 2 | 3 | 4 | I |
| | II | 3 | 3 | 3 | 3 | 4 | II |
| | III | 3 | 3 | 3 | 3 | 4 | III |
| | IV | 3 | 3 | 3 | 3 | 4 | IV |
| | V | 2 | 2 | 3 | 3 | 4 | V |
| | | | | | | | Telescope mode |

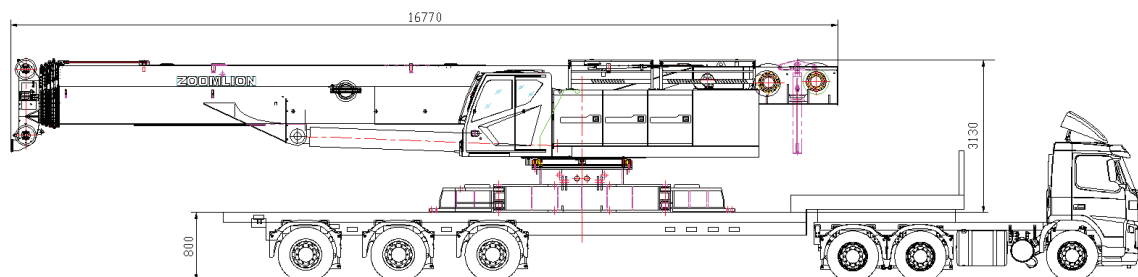
3. Transport dimensions

Based on a common dismantling principle, this crane can be dismantled into several large parts for transportation.

Transportation plan 1: remove the counterweight and balance weight from the crane body, and transport the crane body (73 t) by one trailer; transport the counterweight and balance counterweight (52 t) by another trailer.

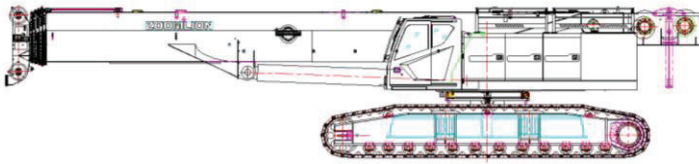


Transportation plan 2: remove the counterweight and balance weight, left and right crawler carriers from the crane body, and transport the crane body (47 t) by one trailer; transport the counterweight and balance counterweight by a second trailer; transport the left and right crawler carriers by a third trailer.



Main components and their dimensions and weight

Crane body (with the crawler carrier)



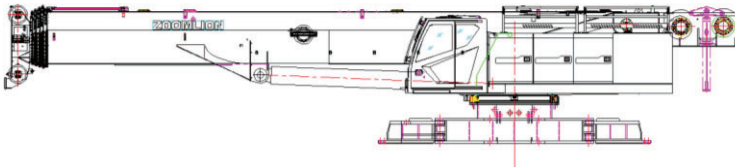
| | |
|-----------|-------|
| Length mm | 16770 |
|-----------|-------|

| | |
|----------|------|
| Width mm | 3600 |
|----------|------|

| | |
|-----------|------|
| Height mm | 3620 |
|-----------|------|

| | |
|-----------|-------|
| Weight kg | 73000 |
|-----------|-------|

Crane body (without the crawler carrier)



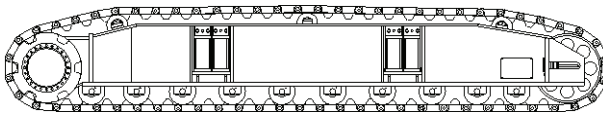
| | |
|-----------|-------|
| Length mm | 16770 |
|-----------|-------|

| | |
|----------|------|
| Width mm | 3000 |
|----------|------|

| | |
|-----------|------|
| Height mm | 3620 |
|-----------|------|

| | |
|-----------|-------|
| Weight kg | 47000 |
|-----------|-------|

Crawler carrier assembly X2



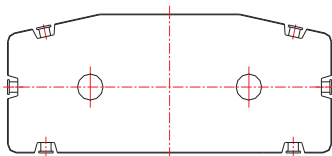
| | |
|-----------|------|
| Length mm | 7880 |
|-----------|------|

| | |
|----------|------|
| Width mm | 1100 |
|----------|------|

| | |
|-----------|------|
| Height mm | 1270 |
|-----------|------|

| | |
|-----------|-------|
| Weight kg | 14300 |
|-----------|-------|

Counterweight plate X3



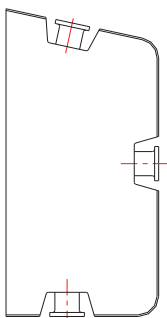
| | |
|-----------|------|
| Length mm | 3900 |
|-----------|------|

| | |
|----------|------|
| Width mm | 1600 |
|----------|------|

| | |
|-----------|-----|
| Height mm | 440 |
|-----------|-----|

| | |
|-----------|-------|
| Weight kg | 10000 |
|-----------|-------|

Left and right counterweight plates X2



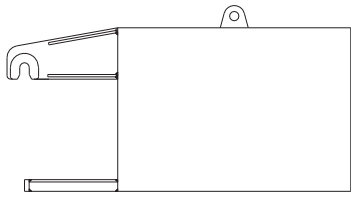
| | |
|-----------|------|
| Length mm | 1530 |
|-----------|------|

| | |
|----------|-----|
| Width mm | 750 |
|----------|-----|

| | |
|-----------|------|
| Height mm | 1050 |
|-----------|------|

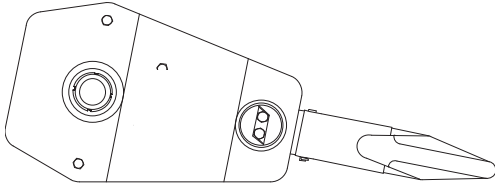
| | |
|-----------|------|
| Weight kg | 5000 |
|-----------|------|

Fixed balancing counterweight X2



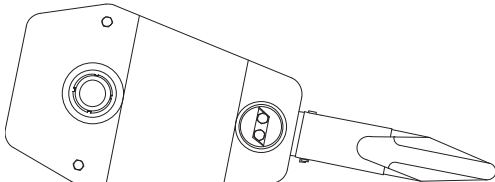
| | |
|-----------|------|
| Length mm | 1600 |
| Width mm | 1100 |
| Height mm | 795 |
| Weight kg | 3500 |

110 t hook



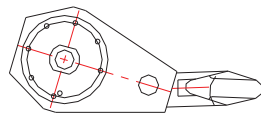
| | |
|-----------|------|
| Length mm | 1950 |
| Width mm | 760 |
| Height mm | 552 |
| Weight kg | 1330 |

60 t hook



| | |
|-----------|------|
| Length mm | 1740 |
| Width mm | 760 |
| Height mm | 411 |
| Weight kg | 750 |

9 t hook



| | |
|-----------|-----|
| Length mm | 900 |
| Width mm | 370 |
| Height mm | 370 |
| Weight kg | 320 |

Note:

1. The components above are only schematic, and they are not drawn according to a fixed scale. The length dimension is overall dimension.
2. The weight listed in above table does not include the weight of package. The actual weight of a component may be different from the weight listed in above table due to manufacturing error.
3. The components above may be improved, which will result in changes in dimensions and weight. Therefore, the actual weight and dimension should be subject to factory products.
4. There are 5 configurations of the main hook: 150 t, 110 t, 60 t, 25 t, and 9 t. Among them, the 110 t straight shank hook, 60 t straight shank hook and 9 t straight shank hook are standard configuration, while the 150 t straight twin hook and 25 t straight shank hook are optional.