



# ROUGH TERRAIN CRANE XCR120\_AU

**MINING PIONEER**



**120 t**



**50 m**



**52 m**



**64.8 m**









# COMPANY PROFILE

XCMG's Hoisting machinery division is the leader in China's lifting industry focusing on the research, development and the production of mobile cranes. At XCMG's core is a commitment to technological innovation while utilizing the latest digital technologies to push the boundaries of product development and production while following our principles of social responsibility, building a sustainable and better future, and to create value for our customers.





# PRODUCT RANGE

XCMG's Hoisting machinery division boasts a complete product range. Our cranes are sold and serviced in more than 190 countries and regions worldwide, with export shares consistently leading the market.





## WHEELED CRANE

❖ 5 t-220 t Truck Crane    ❖ 40 t-4000 t All Terrain Crane    ❖ 25 t-150 t Rough Terrain Crane

## CRAWLER CRANE

❖ 45 t-4000 t Lattice Crawler Crane    ❖ 30 t-220 t Telescopic Crawler Crane





## Unparalleled off-road performance, effortless lifting mastery

Meet mine safety standards and harsh environment requirements, with strong adaptability to driving and hoisting demands; Extra large and comfortable driver's cab + intelligent auxiliary system brings economical operation and worry-free hoisting.

## Spacious cab for comfortable driving

1.1 m wide super large cab equipped with fresh air system, armrest box pilot, pull-out steps, high-power air conditioning and other functions, meeting mine safety standards and harsh environmental requirements; the sedan-level human-machine interaction system makes it easy to control the vehicle, bringing more comfortable and convenient operation.

## Flexible and maneuverable, convenient for jobsite transfer

Equipped with all-wheel driving system, 4 steering modes, and forward and backward driving function, the minimum turning radius is only 8.4 m, ensuring high maneuverability; with a maximum grade ability of 80% and specialized off-road patterned tires, it can travel across various terrains effortlessly.

## Superior capacity for excellent lifting performance

The 5-section 50 m boom has the 0° OM, ensuring worry-free hoisting in height-limited spaces. The maximum boom length can reach 68.3 m with jib installed, covering wide range of operation modes; The optional jib has power-assisted folding/unfolding function, allowing one person to complete the installation of the jib within 15 minutes; the auxiliary winch and counterweight can conduct self-disassembly and assembly quickly for complete machine transportation, so the transportation plan can be flexibly adjusted to reduce transportation costs.

## Intelligent control with highly efficient operations

Variable support and telescoping with load technology allow customers to conduct hoisting work in places densely packed with goods with ease; with steering angle auto-adjust multi-mode steering technology, the rear wheels can return to neutral automatically. The steering mode can be switched by one button, making steering fast and convenient.

## Industry-leading in energy conservation

Integrated new generation of energy-efficient hydraulic systems, hydraulic torque converter with locking function, and ECO energy-saving technologies. Thus, fuel consumption is greatly reduced.

## Exquisite craftsmanship for upgraded quality

Complete access for climbing & maintenance, professional human-machine engineering simulation analysis, and user-friendly detailed design create an intrinsic quality that is comfortable to operate and easy to maintain.





# CONTENTS

|                                    |       |
|------------------------------------|-------|
| Product advantages and highlights  | 1-10  |
| Dimensions                         | 11    |
| Technical specifications           | 12-13 |
| Optional equipment/ Weight         | 14    |
| Working speed                      | 15    |
| Counterweight                      | 16    |
| Boom / Jib combinations            | 17    |
| Load charts                        | 18-25 |
| Table of main technical parameters | 26-27 |
| Description of symbols             | 28-29 |







# SPACIOUS CAB FOR COMFORTABLE DRIVING

## 1.1 m SUPER LARGE CAB, MORE SUITABLE FOR USERS WITH TALL AND LARGE PHYSIQUES

Dust-proof, noise-canceling, highly-sealed driver's cab, with extra-space design, meets the tall user's demand for free movement of head, elbows, and legs; wide seats for more space and comfort.

The sedan-class human-machine interaction system enables friendly dialog between operator and the crane.

|   |                               |                                                                                                                                                       |
|---|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① | Large windshield              | Reduce blind spots for safer driving.                                                                                                                 |
| ② | Instrument panel              | Well-bedded and streamlined design for convenient operation.                                                                                          |
| ③ | AC                            | Adjustable air outlet, T3 HVAC and fresh air system for comfortable driving.                                                                          |
| ④ | Emergency stop switch         | Accessible for safe operation.                                                                                                                        |
| ⑤ | Operation display             | The 10.4 inch true color touch screen with adjustable angle provides a friendly screen and rich information at a glance.                              |
| ⑥ | Monitor                       | It is equipped with winch monitoring, reversing camera, right-sided blind-spot camera; all-round visibility for operation and driving with safer use. |
| ⑦ | Control lever                 | Vibration lever is equipped to perceive the lifting operation speed easily.                                                                           |
| ⑧ | Other humanized configuration | 12/24V power interface, bluetooth audio system and cup holder, double-layer storage box, etc.                                                         |



## FLEXIBLE AND MANEUVERABLE

- It has crab steering mode, all-wheel steering mode, front axle independent and rear axle independent steering mode, all of which are controlled by steering wheel, which is more in line with driving habits.
- With forward and backward driving function, and a minimum turning radius of only 8.4 m, it is flexible with strong adaptability in narrow spaces.

## STRONG POWER

- It features a 231 kw high power engine and a low-speed, high-torque hydraulic torque converter drivetrain. With full-axle drive and specialized off-road treaded tires, it shows strong pass ability (80%) for potholed, muddy and other harsh terrains.



## SUPERB LIFTING PERFORMANCE

- The 5-section 50 m wire-rope-type telescoping boom has 0° operation mode with short boom length, easy to conduct lifting operations in height-limited OM. With jib installed, the maximum boom length can reach 68.3 m, covering a wide range of operation modes.

## ONE-MAN OPERATION, LOW OPERATING COST

- The optional jib has power-assisted folding/unfolding function, allowing one person to complete the installation of the jib within 15 minutes; the auxiliary winch and counterweight can conduct self-disassembly and assembly quickly for complete machine transportation, so the transportation plan can be flexibly adjusted to reduce transportation costs.





# INTELLIGENT CONTROL WITH HIGHLY EFFICIENT OPERATIONS

## ULTRAHIGH WORKING EFFICIENCY

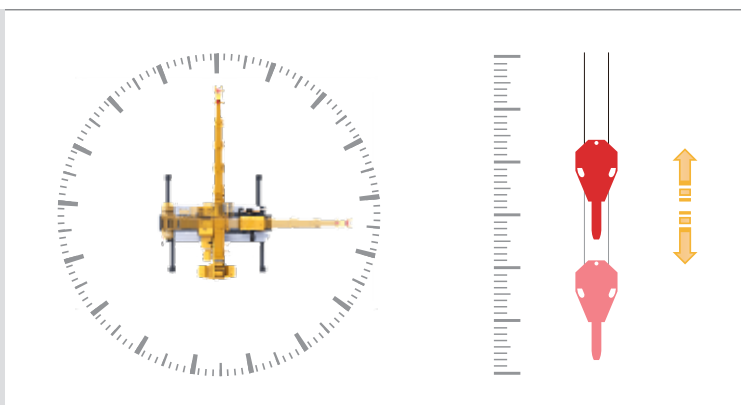
- The large displacement dual variable plunger pump, matched with XCMG patented combined flow valve, the hoisting speed can reach 145 m/min, boom luffing time can reach 55 s and boom fully extended time can reach 125 s, resulting in higher comprehensive operational efficiency.

## DUAL-PUMP VALVE CONTROLLED LOAD-SENSING SYSTEM

- Dedicated dual-pump confluence control technology is available; double-pump confluence for single movement with quick operation; independent subsystem oil supply for combined movements; the movements are accurate and controllable for high operation efficiency. Hydraulic oil radiator with automatic temperature control for sustainable operation in high or low temperature environment.

### FINE CONTROL

Winch, slewing and luffing operations all reach millimeter-level fine control.





**BOOM TELESCOPING WITH LOAD TECHNOLOGY**

- The boom can safely perform the telescoping operation with load at any point within OM ranges; the construction range is wide, and the working efficiency is improved by 30%-50% for safe and reliable lifting operations.

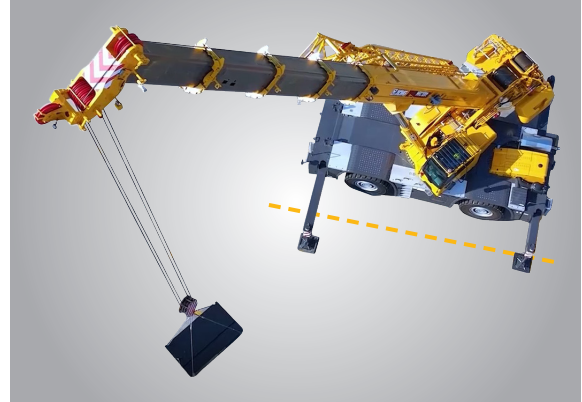




# INTELLIGENT CONTROL WITH HIGHLY EFFICIENT OPERATIONS

## VARIABLE SUPPORT TECHNOLOGY (OPTIONAL)

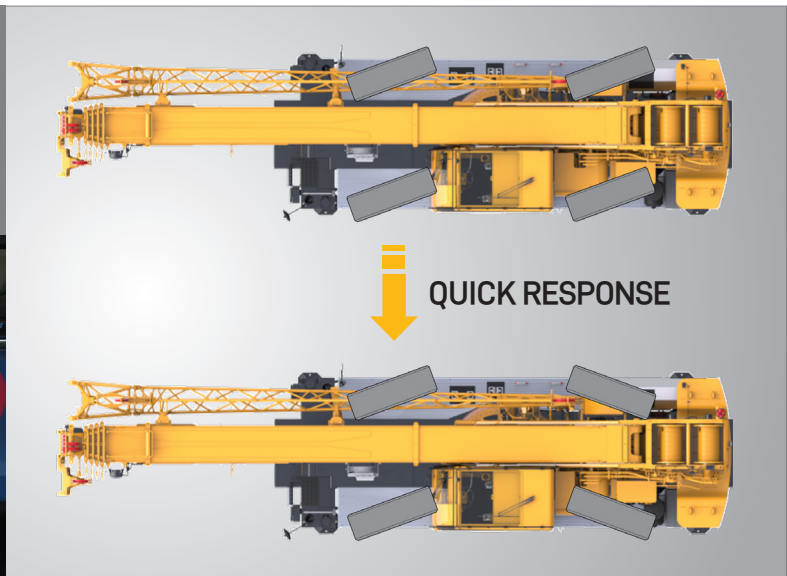
- Any outrigger telescoping length combination is available, with more applicable OM scenarios. The crane can operate smoothly in narrow spaces, with high operating efficiency.



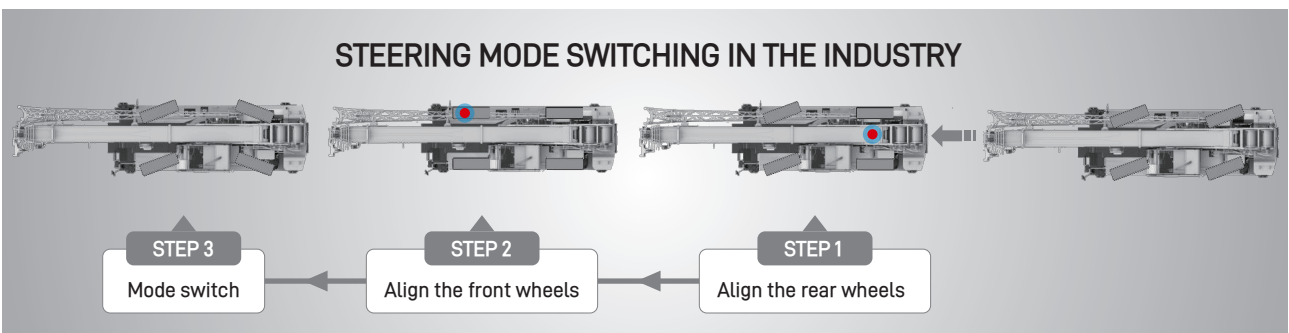
## EXCLUSIVE STEERING ANGLE AUTO-ADJUST MULTI-MODE STEERING TECHNOLOGY

- The steering mode can be switched in any state with single control and without manual intervention for the alignment of wheels, making it easier to operate.

### XCMG MULTI-MODE STEERING TECHNOLOGY WITH REAR WHEEL AUTO CENTERING



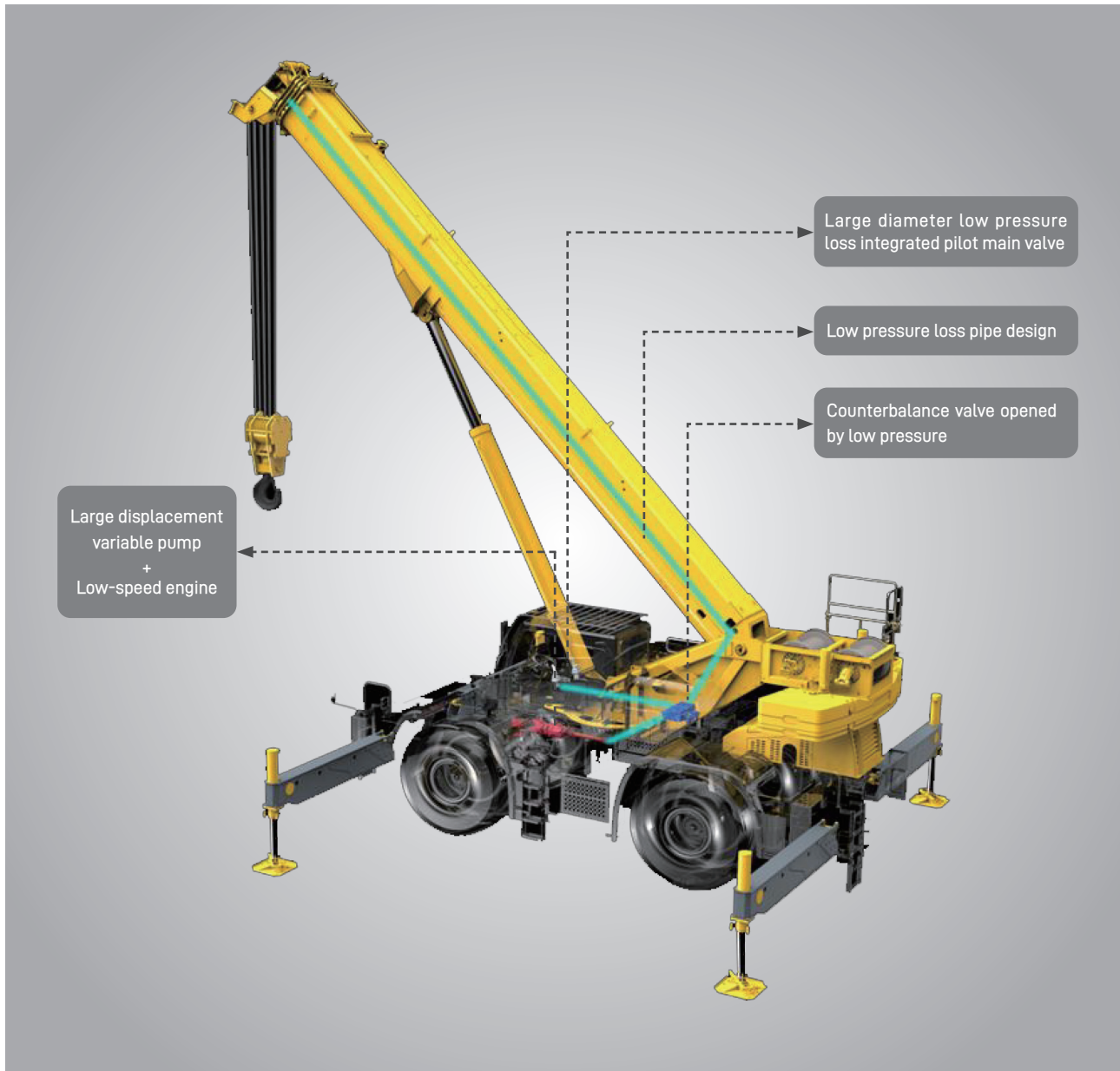
### STEERING MODE SWITCHING IN THE INDUSTRY





**ENERGY-SAVING HYDRAULIC SYSTEM**

- New-type energy-saving hydraulic system with double-variable pump, using gravity assistance for luffing down, makes fuel consumption greatly reduced under various operation modes.

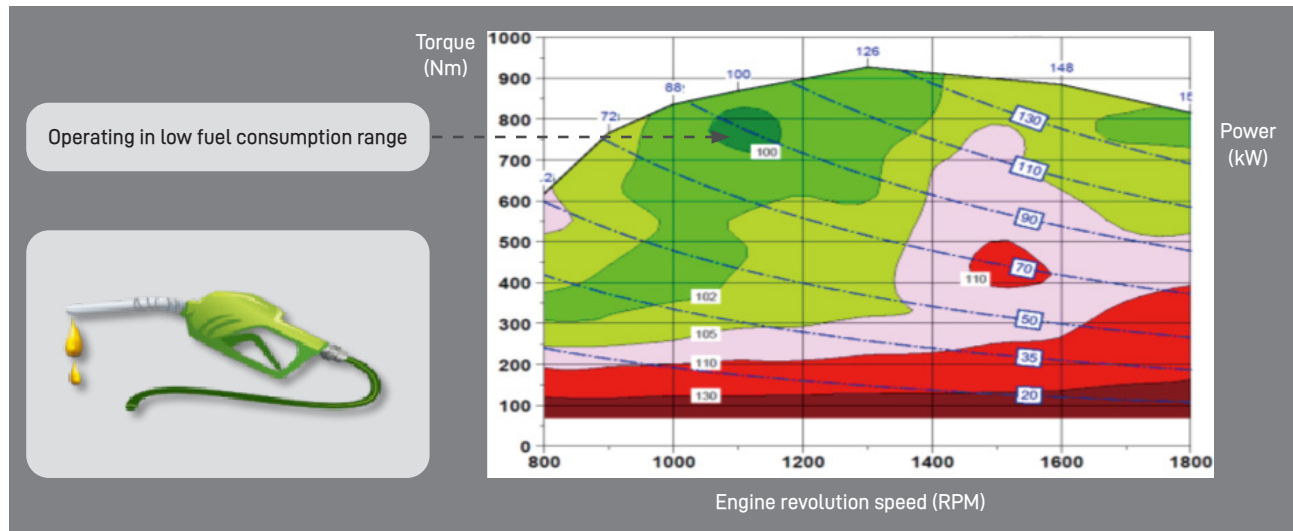




# INDUSTRY-LEADING IN ENERGY CONSERVATION

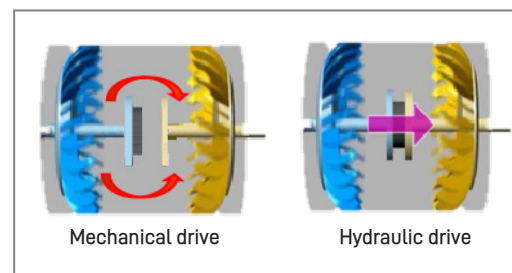
## ECO ENERGY-SAVING MODE

- Under different operation modes, engine speed stays in a low fuel consumption zone at all times, resulting in less fuel consumption for lifting operations under the same OM.



## EFFICIENT HYDRAULIC TORQUE DRIVELINE

- Converter with a lock: low speed and larger torque for efficient operation.
- Low speed hydraulic drivetrain with large torque and high driving efficiency.
- High speed mechanical drivetrain with high transmission efficiency and low oil consumption.





**WELL-PLANNED ACCESSSES**

- With complete climbing and maintenance accesses, the operator can get on the vehicle from all four directions (front, rear, left and right).

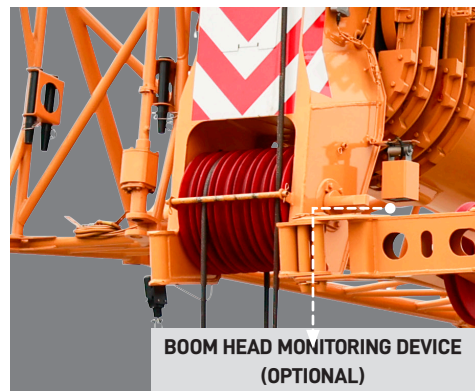
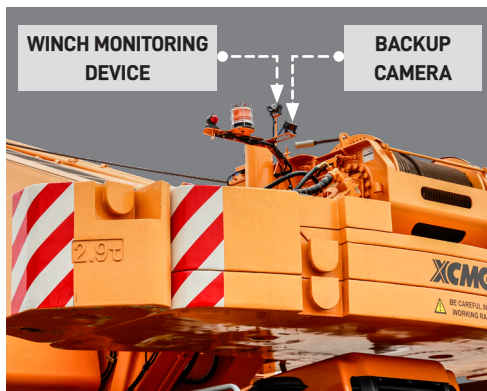




## EXQUISITE CRAFTSMANSHIP FOR UPGRADED QUALITY

### MULTI-DIRECTIONAL MONITORING, SAFER DRIVING AND LIFTING OPERATIONS

- The standard reversing camera, winch monitoring device, and right side monitoring together with the optional boom head monitoring device provide a comprehensive coverage of visibility for both lifting and driving period, ensuring better safety.

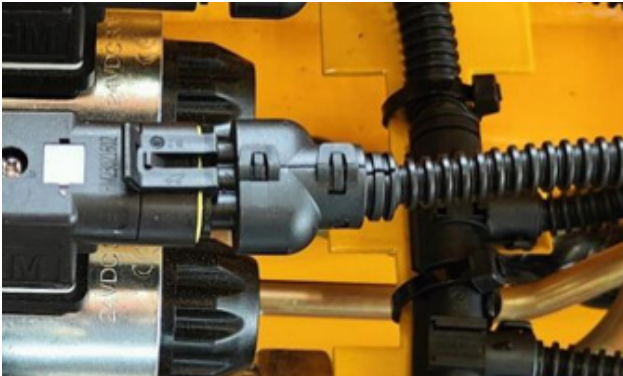


### THREE DIMENSIONAL AIR VENTS, COMFORTABLE DRIVING

- High power air conditioner are equipped with three dimensional air vents for more uniform and delicate flow velocity.







### HIGH GRADE ELECTRICAL PROTECTION, MORE RELIABLE OPERATION

- The circuit connection is reliable, with high fixing rate for connectors, high tail protection rate and high waterproof level.



Filler port of transmission oil  
Pressure testing interface

### CONVENIENT MAINTENANCE

- The pressure measurement ports are centrally arranged, and XCMG's unique external transmission oil filler port ensures convenient maintenance.

### SAFETY CONFIGURATION

- Equipped with chassis motor lock and emergency stop switch to prevent personnel injury caused by crane accidental startup.



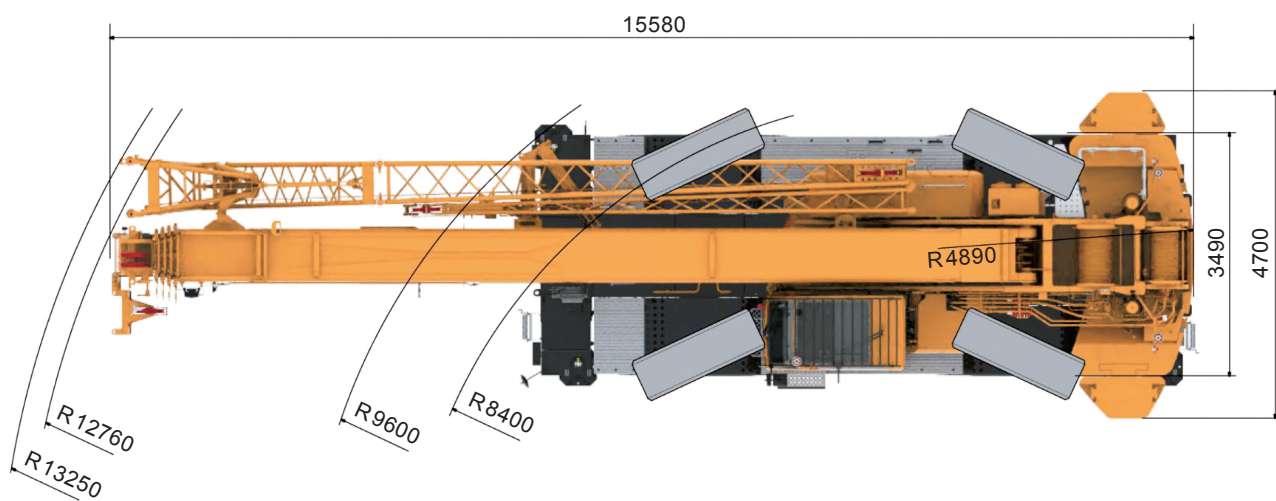
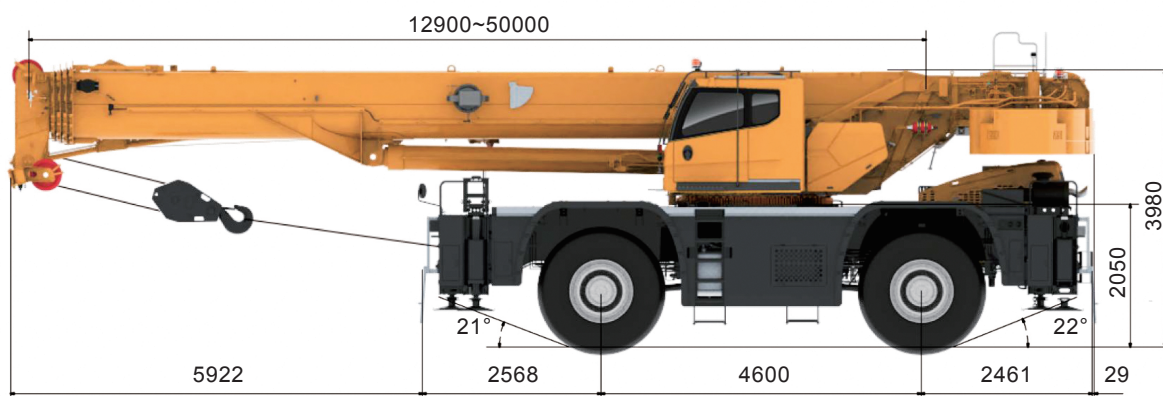
Chassis motor Lock, emergency stop switch



Superstructure emergency stop switch



# DIMENSIONS





**CONFIGURATION**

|                   |                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Boom              | <p>The boom consists of one basic section and four telescopic sections with U-type cross-section, and is extended and retracted by the telescoping system of a double cylinder plus ropes telescoping system. 6 sheaves on boom head are standard.</p> <p>Boom length: 12.9 m ~ 50 m.</p>                                                                               |
| Frame             | <p>Made of high strength fine grained steel, welded torsion-resistant frame type construction with large cross-section, high load-bearing capacity.</p>                                                                                                                                                                                                                 |
| Outriggers        | <p>4 outriggers are arranged in H shape and are electro-hydraulic controlled.</p> <p>Outrigger float dimension: 550 mm × 550 mm.</p> <p>Reaction force of outrigger at max. lifting load: 674.54 kN</p>                                                                                                                                                                 |
| Engine            | <p>L9, in-line, 6-cylinder, water cooled, compression ignition diesel engine, made by American Cummins, with rated power of 231 kw/2100 rpm and max. torque of 1526N.m /1400rpm, compliant with U.S EPA Tier 4f/EU Stage V emission standard.</p> <p>Fuel tank capacity: about 300 L; AdBlue/DEF tank capacity: 30 L.</p>                                               |
| Transmission      | <p>6WG260, German ZF automatic transmission, 6 forward gears, 3 reverse gears.</p>                                                                                                                                                                                                                                                                                      |
| Axle              | <p>Both axles are for driving and steering, featuring large carrying capacity.</p> <p>Driving/steering type: 4×4</p>                                                                                                                                                                                                                                                    |
| Suspension        | <p>The front axle is rigidly connected to the frame;</p> <p>The rear axle is attached to the swing-type hydraulic suspension. During normal driving, the rear axle suspensions take the role of shock absorption;</p> <p>When driving with a suspended load, rear suspension cylinder is locked to blocked state to enhance operation stability.</p>                    |
| Tire              | <p>Four specialized off-road tires. Each axle is equipped with a single tire, with large load bearing capacity.</p> <p>Tire specifications: 875/65R29.</p>                                                                                                                                                                                                              |
| Braking system    | <p>Service brake: dual-circuit full-hydraulic disc brake, acting on all wheels. Automatic alarm will be sent out when the pressure in the braking system becomes too low.</p> <p>Parking brake: spring-loaded brake, hydraulic-released independent disc brake, acting on the front axles and rear axles.</p>                                                           |
| Steering system   | <p>Four steering modes, including front axle independent steering mode, all-wheel steering mode, crab steering mode and independent rear axle steering mode. The steering angle of the tires can be self-adjusted when changing mode.</p>                                                                                                                               |
| Hydraulic system  | <p>The dual-variable piston pump is used for lifting, luffing and telescoping operations. The gear pump is used for slewing, outrigger, steering and braking operation;</p> <p>The main valve is adopted a load sensitive proportional multi-way change valve.</p> <p>Independent hydraulic oil cooler is fitted.</p> <p>Hydraulic oil tank capacity: about 1300 L.</p> |
| Electrical system | <p>24 V DC, two 12 V batteries in series.</p> <p>LMI, head lights, steering lights, reversing lights, turntable lights and boom lights are equipped.</p>                                                                                                                                                                                                                |



# TECHNICAL SPECIFICATIONS



## CONFIGURATION

|                   |                                                                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating method  | Electrically controlled operation system is equipped with two levers controlling the movements of the crane.                                                                                                                                                                                   |
| Main winch system | The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balanced valve equipped.                                                                                                                                                        |
| Slewing system    | Single-row four-point ball contact slewing ring, driven by a hydraulic motor, with built-in planetary gear reducer and constant closed brake equipped.                                                                                                                                         |
| Driver's cab      | The driver's cab can be tilted forward and backward, featuring sliding doors with safety glass and roof protective grilles. It also has sun screen for the front the top windshield.<br>Equipped with adjustable seats, HVAC, audio system, 12 V and 24 V power interfaces, and backup camera. |
| Safety devices    | Hydraulic counterbalance valve, relief valve, double-way lock, LMI, right camera and winch camera. Lowering limiter is equipped in winch to prevent rope over-releasing. Anti-two block is fitted on the boom head to prevent rope over-winding.                                               |
| Counterweight     | 16 t                                                                                                                                                                                                                                                                                           |
| Hook block        | 60 t, 7 t hook block                                                                                                                                                                                                                                                                           |
| Luffing system    | Single cylinder luffing, with counterbalance valve featuring the load compensation function.                                                                                                                                                                                                   |

Product parts list is as mentioned above. Please refer to the product quotation for specific parts.





| OPTIONAL EQUIPMENT                | COMPONENT DESCRIPTION                                                                                                                                                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hook block                        | 110 t hook block                                                                                                                                                                                                                                      |
| Counterweight                     | The total weight is 7 t, 2.9 t × 2 and 1.2 t.                                                                                                                                                                                                         |
| Jib                               | Lattice structure with 0°, 15° and 30° jib offset angles, stowed along the side of the boom.<br>Jib length: 10.8 m/18.3 m.                                                                                                                            |
| Auxiliary winch                   | The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balanced valve equipped.                                                                                                               |
| Asymmetric OM                     | Lifting operations can be conducted under any length combination of the outrigger beams. It can predict operational movements, and provide real-time alarm and safety protection for hazardous operations, ensuring operational safety and stability. |
| Spark arrestor                    | Installed at the muffler tailpipe to preclude the emission of sparks.                                                                                                                                                                                 |
| Measurement of outrigger pressure | Real-time outrigger pressure display, automatic alarm when approaching overload pressure.                                                                                                                                                             |
| Boom head monitoring device       | Increase the boom head monitoring field of view to enhance the visual space.                                                                                                                                                                          |
| Toolbox                           | Placed at the front of the frame, with a double-layer structure design, it can accommodate rigging and outrigger sleepers.                                                                                                                            |



| AXLE | 1      | 2      | TOTAL WEIGHT                                                 |
|------|--------|--------|--------------------------------------------------------------|
| t    | 35.167 | 34.881 | 70.048<br>(16 t counterweight)                               |
| t    | 32.759 | 44.290 | 77.049<br>(16 t counterweight+optional 7t counterweight+jib) |

Note: With 23 t counterweight, only short-distance job site transfer is allowed, and the maximum speed shall not be greater than 5 km/h.



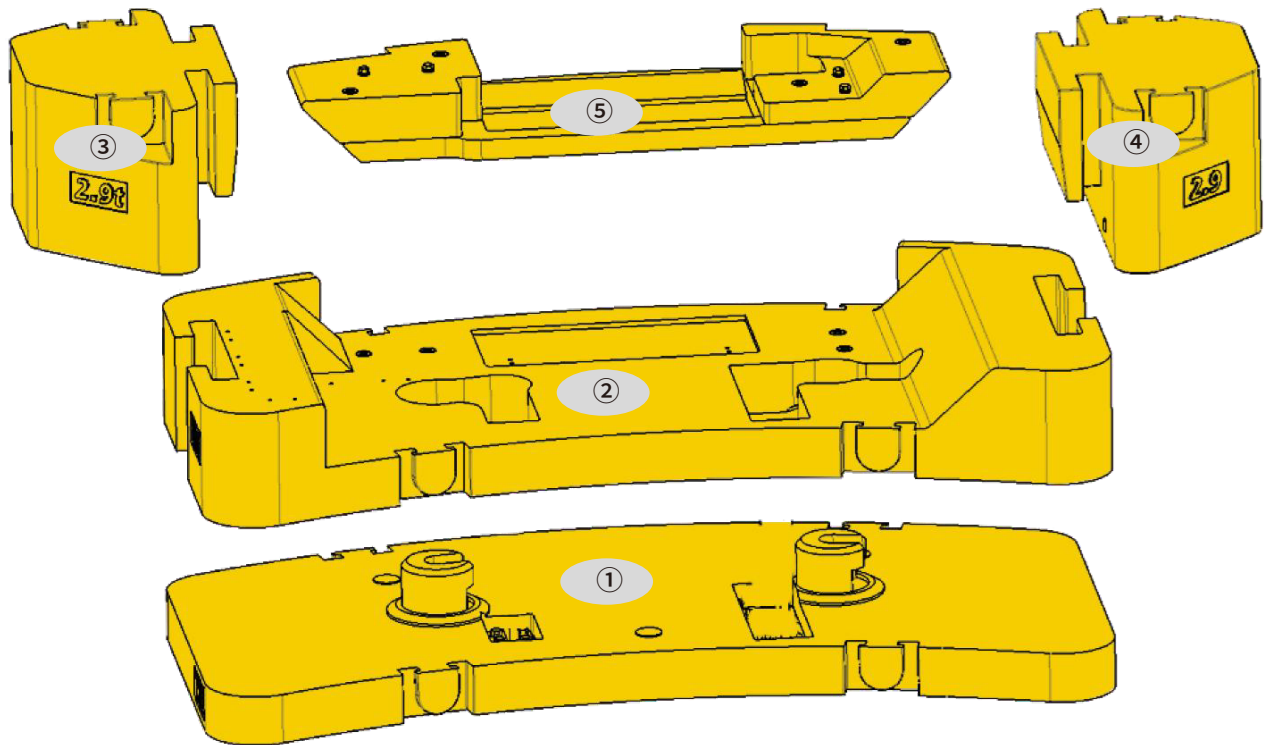
| HOOK BLOCK | PARTS OF LINE | WEIGHT (KG) | DIMENSION (MM) | NOTES       |
|------------|---------------|-------------|----------------|-------------|
| 110 t      | 13            | 1018        | 640×580×1749   | Dual hooks  |
| 60 t       | 6             | 500         | 450×590×1494   | Single hook |
| 7 t        | 1             | 257         | 731×φ426       | Single hook |

## WORKING SPEEDS

|                                                                                   |                                                                                   |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |
| 875/65R29                                                                         |                                                                                   | 30 km/h                                                                           | 80%                                                                                 |

|                                                                                     |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|    |  |  |  |  |
|    | 0-145 m/min, single line, no load                                                 | 99 kN                                                                             | 22 mm                                                                               | 250 m                                                                               |
|   | 0-90 m/min, single line, no load                                                  | 71 kN                                                                             | 22 mm                                                                               | 150 m                                                                               |
|  | 0-1.8 r/min                                                                       |                                                                                   |                                                                                     |                                                                                     |
|  | Approx. 55 s for boom luffing from 20° to 80°                                     |                                                                                   |                                                                                     |                                                                                     |
|  | Approx. 125 s for boom extending from 12.9 m to 50 m                              |                                                                                   |                                                                                     |                                                                                     |



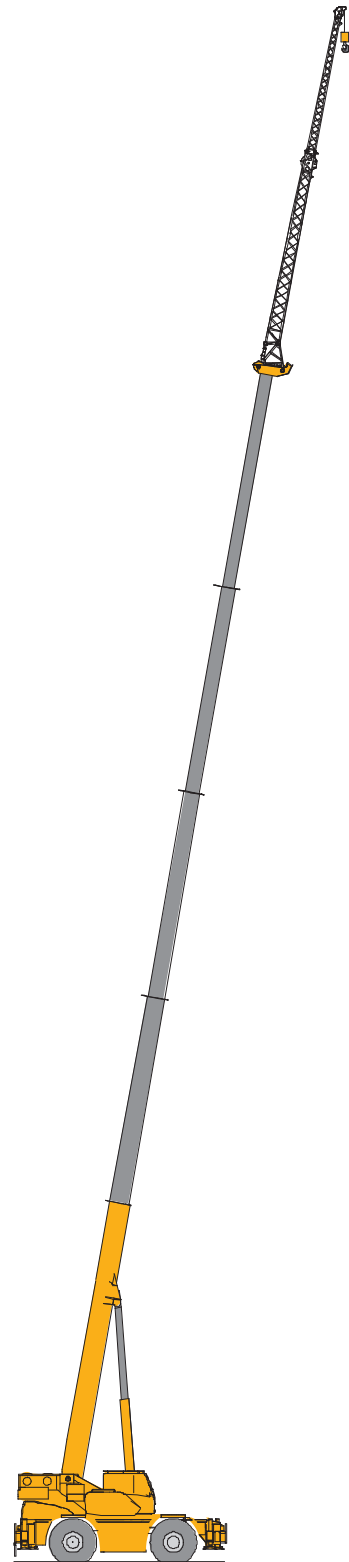
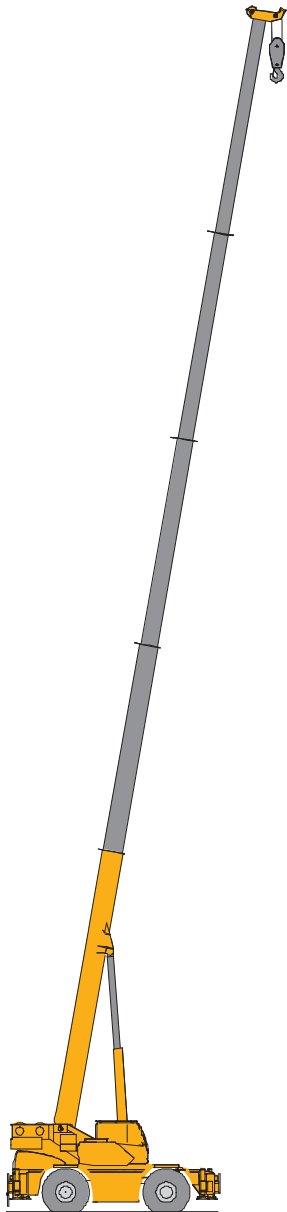


|                         | ①              | ②             | ③            | ④            | ⑤            |
|-------------------------|----------------|---------------|--------------|--------------|--------------|
| Dimensions (L×W×H) (mm) | 3480×1850 ×570 | 3480×1850×455 | 1241×787×655 | 1241×787×655 | 2475×720×256 |
| Weight (t)              | 7.2            | 8.8           | 2.9          | 2.9          | 1.2          |

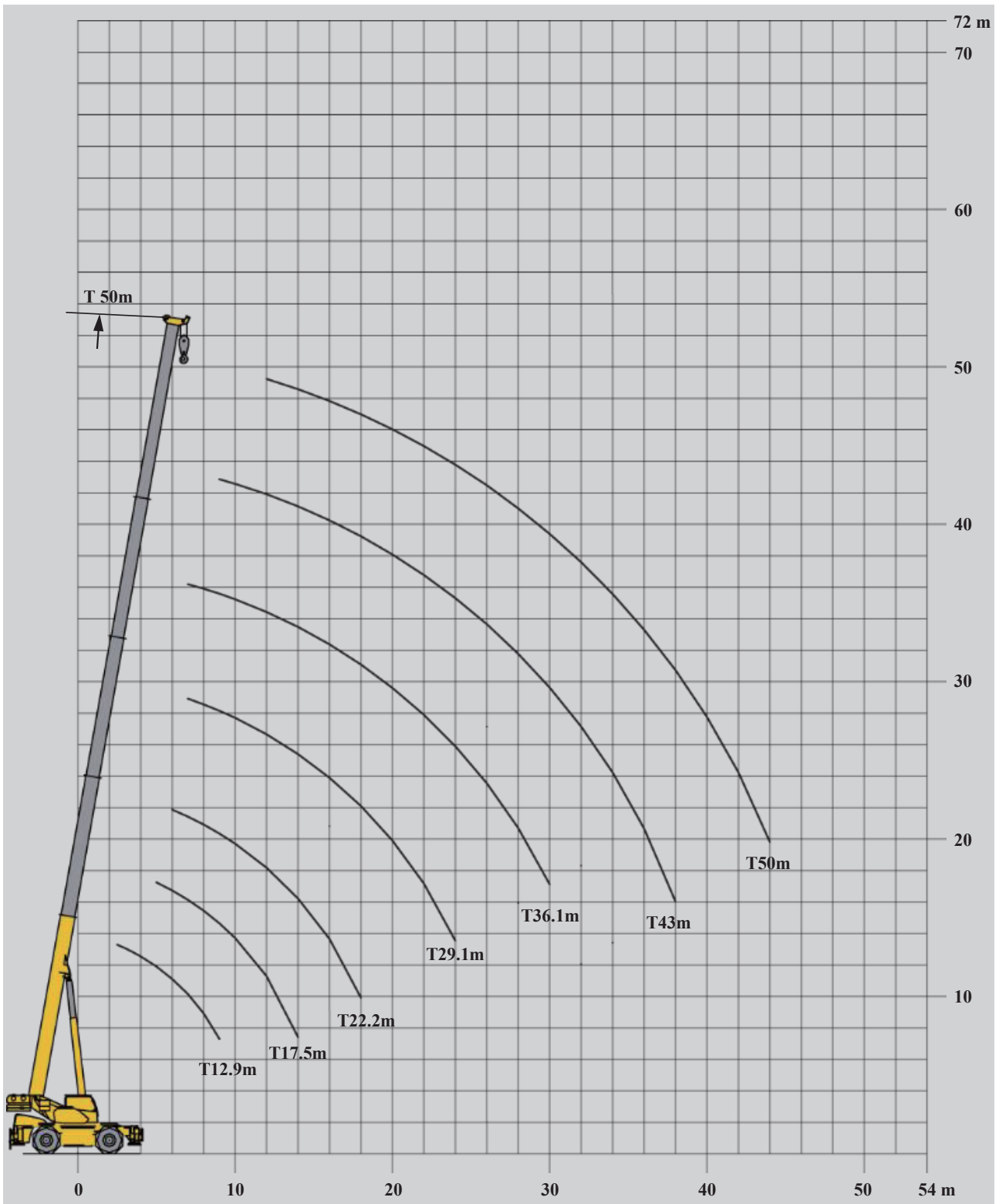
| OPERATION MODES | 23 T              | 16T   | 0T |
|-----------------|-------------------|-------|----|
| Combinations    | ① + ② + ③ + ④ + ⑤ | ① + ② | —  |

## BOOM / JIB COMBINATIONS

| Boom        | FIXED JIB            |
|-------------|----------------------|
| T:12.9-50 m | T:50 m F:10.8/18.3 m |

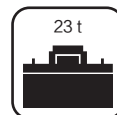






# LOAD CHARTS

## BOOM

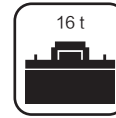
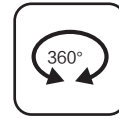


|     | 12.9   | 17.5 | 22.2 | 29.1 | 36.1 | 43.0 | 50.0 | 19.9 | 26.8 | 33.8 | 40.7 | 24.5 | 31.5 | 38.4 | 45.4 |     |
|-----|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 2.5 | 120.0* |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.5 |
| 3   | 110.0  |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3   |
| 4   | 90.0   |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4   |
| 5   | 72.0   | 70.0 |      |      |      |      |      | 39.2 |      |      |      |      |      |      |      | 5   |
| 6   | 60.0   | 59.5 | 56.0 |      |      |      |      | 40.3 | 39.2 |      |      | 37.5 |      |      |      | 6   |
| 7   | 52.0   | 52.0 | 52.0 | 37.0 | 31.0 |      |      | 41.3 | 40.0 | 28.0 |      | 38.6 | 30.1 |      |      | 7   |
| 8   | 45.5   | 45.5 | 45.0 | 37.0 | 30.5 |      |      | 42.3 | 37.5 | 26.3 | 20.6 | 39.1 | 30.5 | 22.5 |      | 8   |
| 9   | 39.0   | 40.3 | 39.6 | 35.0 | 27.5 | 19.5 |      | 40.0 | 35.2 | 24.7 | 19.8 | 40.1 | 28.0 | 21.6 |      | 9   |
| 10  |        | 35.1 | 34.5 | 31.0 | 27.6 | 18.9 |      | 34.8 | 33.1 | 23.4 | 18.7 | 35.5 | 26.5 | 20.4 | 17.4 | 10  |
| 12  |        | 24.6 | 24.2 | 25.9 | 24.4 | 17.3 | 13.9 | 24.4 | 28.2 | 21.2 | 17.2 | 26.5 | 22.4 | 18.5 | 17.0 | 12  |
| 14  |        | 18.2 | 17.8 | 19.3 | 20.2 | 15.7 | 13.4 | 18.0 | 20.4 | 19.2 | 15.2 | 19.9 | 20.3 | 16.6 | 15.9 | 14  |
| 16  |        |      | 13.6 | 15.0 | 15.8 | 14.0 | 12.4 | 15.2 | 15.9 | 17.5 | 13.5 | 15.5 | 16.4 | 14.9 | 14.1 | 16  |
| 18  |        |      | 10.5 | 11.9 | 12.7 | 12.6 | 12.0 |      | 13.9 | 14.3 | 12.2 | 12.4 | 13.2 | 13.4 | 12.7 | 18  |
| 20  |        |      |      | 9.6  | 10.4 | 10.9 | 10.8 |      | 11.5 | 12.0 | 11.1 | 10.1 | 10.9 | 11.4 | 11.5 | 20  |
| 22  |        |      |      | 7.8  | 8.6  | 9.1  | 9.5  |      | 9.7  | 10.1 | 10.0 |      | 9.1  | 9.6  | 9.9  | 22  |
| 24  |        |      |      | 6.4  | 7.2  | 7.6  | 8.0  |      |      | 8.6  | 9.0  |      | 7.6  | 8.1  | 8.4  | 24  |
| 26  |        |      |      |      | 6.0  | 6.5  | 6.8  |      |      | 7.5  | 7.8  |      | 6.5  | 6.9  | 7.2  | 26  |
| 28  |        |      |      |      | 5.0  | 5.5  | 5.8  |      |      | 6.5  | 6.8  |      |      | 5.9  | 6.2  | 28  |
| 30  |        |      |      |      | 4.2  | 4.6  | 5.0  |      |      |      | 6.0  |      |      | 5.1  | 5.4  | 30  |
| 32  |        |      |      |      |      | 3.9  | 4.3  |      |      |      | 5.2  |      |      | 4.4  | 4.7  | 32  |
| 34  |        |      |      |      |      | 3.3  | 3.6  |      |      |      | 4.6  |      |      | 3.8  | 4.0  | 34  |
| 36  |        |      |      |      |      | 2.8  | 3.1  |      |      |      | 4.1  |      |      |      | 3.5  | 36  |
| 38  |        |      |      |      |      | 2.3  | 2.6  |      |      |      |      |      |      |      | 3.0  | 38  |
| 40  |        |      |      |      |      |      | 2.2  |      |      |      |      |      |      |      | 2.6  | 40  |
| 42  |        |      |      |      |      |      | 1.8  |      |      |      |      |      |      |      |      | 42  |
| 44  |        |      |      |      |      |      | 1.5  |      |      |      |      |      |      |      |      | 44  |

Note: \* means that the boom sheaves need to be used together with the auxiliary sheave under 14 parts of line.



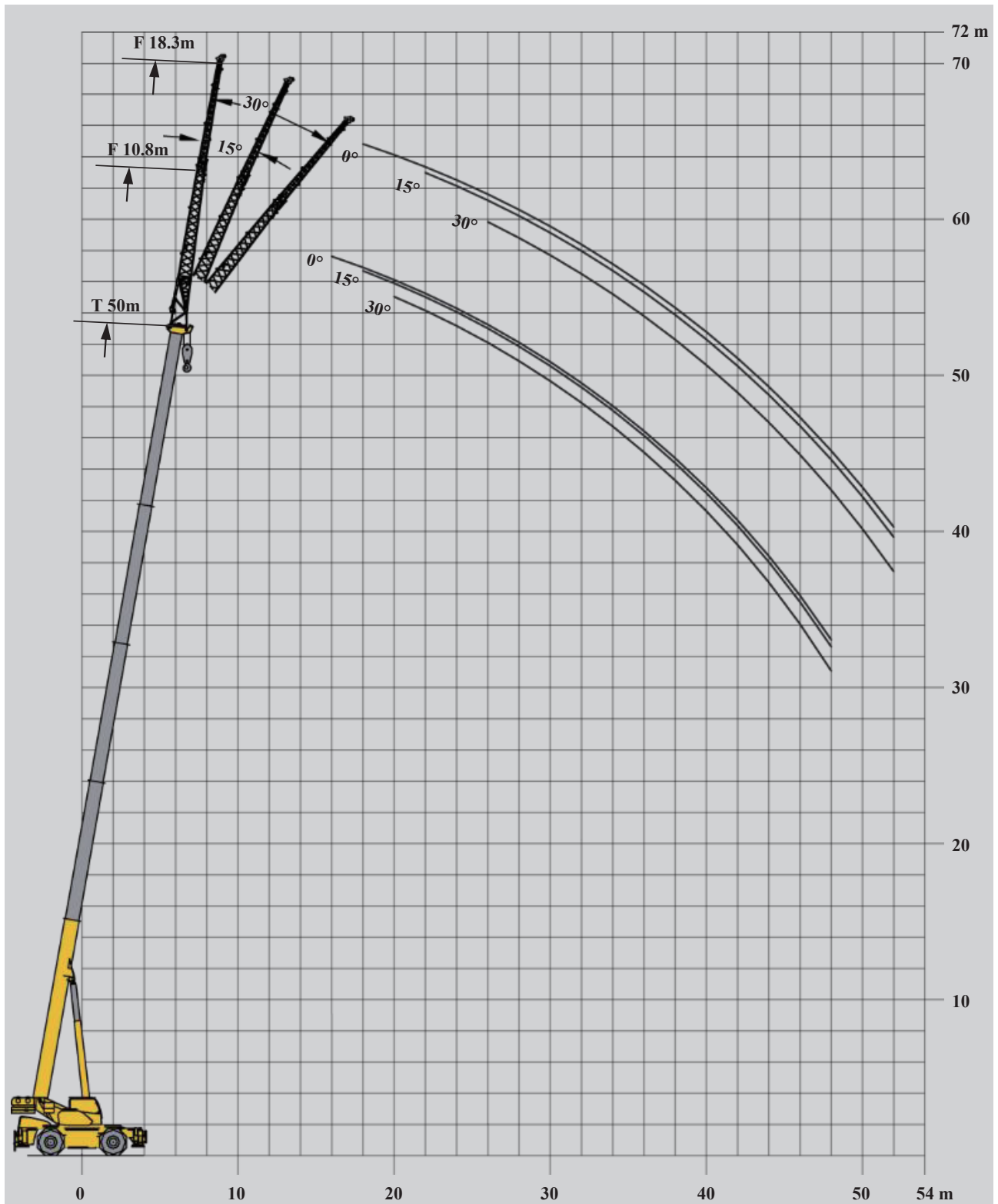
# BOOM



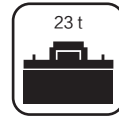
|     | 12.9   | 17.5 | 22.2 | 29.1 | 36.1 | 43.0 | 50.0 | 19.9 | 26.8 | 33.8 | 40.7 | 24.5 | 31.5 | 38.4 | 45.4 |     |
|-----|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 2.5 | 120.0* |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.5 |
| 3   | 110.0  |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3   |
| 4   | 85.0   |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4   |
| 5   | 70.0   | 70.0 |      |      |      |      |      | 39.2 |      |      |      |      |      |      |      | 5   |
| 6   | 58.5   | 58.5 | 55.0 |      |      |      |      | 40.3 | 39.2 |      |      | 37.5 |      |      |      | 6   |
| 7   | 49.0   | 49.0 | 47.5 | 37.0 | 31.0 |      |      | 41.3 | 40.0 | 28.0 |      | 38.6 | 30.1 |      |      | 7   |
| 8   | 42.5   | 42.2 | 40.3 | 37.0 | 30.5 |      |      | 42.1 | 37.5 | 26.3 | 20.6 | 39.1 | 30.5 | 22.5 |      | 8   |
| 9   | 37.0   | 35.7 | 34.1 | 35.0 | 27.5 | 19.5 |      | 37.1 | 35.2 | 24.7 | 19.8 | 36.5 | 28.0 | 21.6 |      | 9   |
| 10  |        | 29.9 | 29.4 | 31.0 | 27.6 | 18.9 |      | 33.0 | 33.1 | 23.4 | 18.7 | 32.0 | 26.5 | 20.4 | 17.4 | 10  |
| 12  |        | 20.3 | 19.9 | 21.6 | 22.7 | 17.3 | 13.9 | 23.1 | 24.1 | 21.2 | 17.2 | 22.2 | 22.4 | 18.5 | 17.0 | 12  |
| 14  |        | 14.7 | 14.3 | 15.9 | 16.8 | 15.7 | 13.4 | 17.2 | 18.1 | 18.7 | 15.2 | 16.5 | 17.4 | 16.6 | 15.9 | 14  |
| 16  |        |      | 10.7 | 12.1 | 13.0 | 13.6 | 12.4 | 13.4 | 14.2 | 14.7 | 13.5 | 12.6 | 13.5 | 14.1 | 14.1 | 16  |
| 18  |        |      | 8.0  | 9.4  | 10.3 | 10.8 | 11.2 |      | 11.5 | 11.9 | 12.2 | 9.9  | 10.8 | 11.3 | 11.7 | 18  |
| 20  |        |      |      | 7.4  | 8.2  | 8.8  | 9.1  |      | 9.4  | 9.8  | 10.2 | 7.9  | 8.7  | 9.2  | 9.6  | 20  |
| 22  |        |      |      | 5.9  | 6.6  | 7.2  | 7.5  |      | 7.8  | 8.2  | 8.6  |      | 7.2  | 7.6  | 8.0  | 22  |
| 24  |        |      |      | 4.6  | 5.4  | 5.9  | 6.3  |      |      | 6.9  | 7.3  |      | 5.9  | 6.4  | 6.7  | 24  |
| 26  |        |      |      |      | 4.4  | 4.9  | 5.2  |      |      | 5.9  | 6.2  |      | 4.9  | 5.3  | 5.6  | 26  |
| 28  |        |      |      |      | 3.5  | 4.0  | 4.3  |      |      | 5.0  | 5.4  |      |      | 4.5  | 4.8  | 28  |
| 30  |        |      |      |      | 2.7  | 3.3  | 3.6  |      |      |      | 4.6  |      |      | 3.7  | 4.0  | 30  |
| 32  |        |      |      |      |      | 2.7  | 3.0  |      |      |      | 4.0  |      |      | 3.1  | 3.4  | 32  |
| 34  |        |      |      |      |      | 1.9  | 2.4  |      |      |      | 3.4  |      |      | 2.5  | 2.9  | 34  |
| 36  |        |      |      |      |      | 1.4  | 1.9  |      |      |      | 3.0  |      |      |      | 2.4  | 36  |
| 38  |        |      |      |      |      |      | 1.4  |      |      |      |      |      |      |      | 1.9  | 38  |
| 40  |        |      |      |      |      |      | 1.0  |      |      |      |      |      |      |      |      | 40  |

Note: \* means that the boom sheaves need to be used together with the auxiliary sheave under 14 parts of line.

# WORKING RANGE DIAGRAM



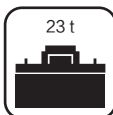


**JIB****50+10.8**

|    | 0°  | 15° | 30° |    |
|----|-----|-----|-----|----|
| 16 | 6.2 |     |     | 16 |
| 18 | 6.1 | 5.3 |     | 18 |
| 20 | 6.0 | 5.1 | 3.5 | 20 |
| 22 | 6.0 | 5.1 | 3.3 | 22 |
| 24 | 5.4 | 4.9 | 3.2 | 24 |
| 26 | 4.6 | 4.6 | 3.1 | 26 |
| 28 | 4.0 | 4.2 | 3.0 | 28 |
| 30 | 3.4 | 3.6 | 2.9 | 30 |
| 32 | 3.0 | 3.2 | 2.7 | 32 |
| 34 | 2.5 | 2.7 | 2.6 | 34 |
| 36 | 2.2 | 2.3 | 2.5 | 36 |
| 38 | 1.9 | 2.0 | 2.2 | 38 |
| 40 | 1.6 | 1.7 | 1.8 | 40 |
| 42 | 1.4 | 1.4 | 1.5 | 42 |
| 44 | 1.1 | 1.3 | 1.3 | 44 |
| 46 | 0.9 | 1.0 | 1.1 | 46 |
| 48 | 0.7 | 0.8 | 0.9 | 48 |

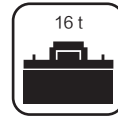
# LOAD CHARTS

JIB



|    | 50+18.3 |     |     |    |
|----|---------|-----|-----|----|
|    | 0°      | 15° | 30° |    |
| 18 | 3.0     |     |     | 18 |
| 20 | 3.1     |     |     | 20 |
| 22 | 3.1     | 2.4 |     | 22 |
| 24 | 3.1     | 2.2 |     | 24 |
| 26 | 3.1     | 2.1 | 1.6 | 26 |
| 28 | 2.9     | 2.0 | 1.5 | 28 |
| 30 | 2.8     | 1.9 | 1.4 | 30 |
| 32 | 2.7     | 1.8 | 1.3 | 32 |
| 34 | 2.6     | 1.7 | 1.2 | 34 |
| 36 | 2.4     | 1.6 | 1.2 | 36 |
| 38 | 2.2     | 1.5 | 1.1 | 38 |
| 40 | 1.8     | 1.4 | 1.1 | 40 |
| 42 | 1.6     | 1.4 | 1.0 | 42 |
| 44 | 1.4     | 1.3 | 1.1 | 44 |
| 46 | 1.2     | 1.2 | 1.0 | 46 |
| 48 | 1.0     | 1.2 | 1.0 | 48 |
| 50 | 0.8     | 1.0 | 1.0 | 50 |
| 52 | 0.6     | 0.8 | 0.9 | 52 |

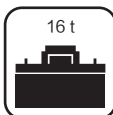


**JIB**


|    | 50+10.8 |     |     |    |
|----|---------|-----|-----|----|
|    | 0°      | 15° | 30° |    |
| 16 | 6.2     |     |     | 16 |
| 18 | 6.1     | 5.3 |     | 18 |
| 20 | 5.9     | 5.1 | 3.5 | 20 |
| 22 | 5.0     | 5.1 | 3.3 | 22 |
| 24 | 4.1     | 4.5 | 3.2 | 24 |
| 26 | 3.5     | 3.8 | 3.1 | 26 |
| 28 | 2.9     | 3.2 | 3.0 | 28 |
| 30 | 2.4     | 2.7 | 2.9 | 30 |
| 32 | 2.1     | 2.3 | 2.4 | 32 |
| 34 | 1.7     | 1.9 | 2.1 | 34 |
| 36 | 1.4     | 1.5 | 1.7 | 36 |
| 38 | 1.2     | 1.3 | 1.4 | 38 |
| 40 | 0.9     | 1.0 | 1.2 | 40 |
| 42 | 0.7     | 0.8 | 0.9 | 42 |
| 44 |         |     | 0.7 | 44 |

# LOAD CHARTS

JIB



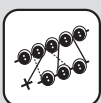
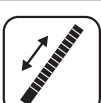
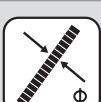
|    | 50+18.3 |     |     |    |
|----|---------|-----|-----|----|
|    | 0°      | 15° | 30° |    |
| 18 | 3.0     |     |     | 18 |
| 20 | 3.1     |     |     | 20 |
| 22 | 3.1     | 2.4 |     | 22 |
| 24 | 3.1     | 2.2 |     | 24 |
| 26 | 3.1     | 2.1 | 1.6 | 26 |
| 28 | 2.9     | 2.0 | 1.5 | 28 |
| 30 | 2.7     | 1.9 | 1.4 | 30 |
| 32 | 2.3     | 1.8 | 1.3 | 32 |
| 34 | 2.0     | 1.7 | 1.2 | 34 |
| 36 | 1.6     | 1.6 | 1.2 | 36 |
| 38 | 1.4     | 1.5 | 1.1 | 38 |
| 40 | 1.2     | 1.4 | 1.1 | 40 |
| 42 | 0.9     | 1.2 | 1.0 | 42 |
| 44 | 0.7     | 1.0 | 1.1 | 44 |
| 46 |         | 0.7 | 0.9 | 46 |
| 48 |         |     | 0.7 | 48 |



| TYPE       | ITEM                                       |        | UNIT        | PARAMETER       |
|------------|--------------------------------------------|--------|-------------|-----------------|
| Dimensions | Dimensions (L×W×H)                         |        | mm          | 15580×3490×3980 |
|            | Axle spacing                               |        | mm          | 4600            |
|            | Track (front/rear)                         |        | mm          | 2590            |
|            | Front overhang / rear overhang             |        | mm          | 2568/2461       |
|            | Front extension / rear extension           |        | mm          | 5922/29         |
| Weight     | Maximum permissible total weight           |        | kg          | 70048           |
|            | Axle load                                  | Axle 1 | kg          | 35167           |
|            |                                            | Axle 2 | kg          | 34881           |
| Power      | Engine model                               |        | —           | L9              |
|            | Rated power / RPM                          |        | kW/(r/min)  | 231/2100        |
|            | Maximum output torque / RPM                |        | N.m/(r/min) | 1526/1400       |
| Travel     | Maximum travel speed                       |        | km/h        | ≥30             |
|            | Minimum stable travel speed                |        | km/h        | 1.8             |
|            | Minimum turning diameter                   |        | m           | ≤16.8           |
|            | Minimum turning diameter at boom tip       |        | m           | ≤25.52          |
|            | Minimum ground clearance                   |        | mm          | 465             |
|            | Approach angle                             |        | °           | 21              |
|            | Departure angle                            |        | °           | 22              |
|            | Braking distance (initial speed at 24km/h) |        | m           | ≤9              |
|            | Maximum grade ability                      |        | %           | ≥80             |

# MAIN TECHNICAL PARAMETERS

| TYPE             | ITEM                                              |                           |            | UNIT  | PARAMETER    |
|------------------|---------------------------------------------------|---------------------------|------------|-------|--------------|
| Main performance | Maximum rated lifting capacity                    |                           |            | t     | 120          |
|                  | Minimum rated working radius                      |                           |            | m     | 2.5          |
|                  | Turning radius at turntable tail                  | At the counterweight      |            | mm    | 4890         |
|                  | Maximum load moment                               | Base boom                 |            | kN.m  | 3567         |
|                  |                                                   | Fully-extended boom       |            | kN.m  | 2117         |
|                  |                                                   | Fully-extended boom + jib |            | kN.m  | 1294.6       |
|                  | Outrigger span<br>(full extension/half extension) | Longitudinal              |            | m     | 8.45         |
|                  |                                                   | Lateral                   |            | m     | 8.4/6.8, 5.2 |
|                  | Lifting height                                    | Base boom                 |            | m     | 13.3         |
|                  |                                                   | Fully-extended boom       |            | m     | 49.8         |
|                  |                                                   | Fully-extended boom + jib |            | m     | 64.8         |
|                  | Boom length                                       | Base boom                 |            | m     | 12.9         |
|                  |                                                   | Fully-extended boom       |            | m     | 50           |
|                  |                                                   | Fully-extended boom + jib |            | m     | 68.3         |
|                  | Jib offset angle                                  |                           |            | °     | 0, 15, 30    |
| Working speeds   | Time for raising boom                             |                           |            | s     | ≤55          |
|                  | Time for fully extending the boom                 |                           |            | s     | ≤125         |
|                  | Maximum slewing speed                             |                           |            | r/min | ≥1.8         |
|                  | Time for extending / retracting<br>outriggers     | Outrigger beams           | Retracting | s     | ≤40          |
|                  |                                                   |                           | Extending  | s     | ≤40          |
|                  |                                                   | Outrigger jacks           | Retracting | s     | ≤55          |
|                  |                                                   |                           | Extending  | s     | ≤45          |
|                  | Hoisting speed<br>(Single line, no load)          | Main winch system         |            | m/min | ≥145         |
|                  |                                                   | Auxiliary winch           |            | m/min | ≥90          |
| Noise            | Exterior noise level                              |                           |            | dB(A) | ≤108         |
|                  | Noise level at seated position                    |                           |            | dB(A) | ≤85          |

|                                                                                     |                                                   |
|-------------------------------------------------------------------------------------|---------------------------------------------------|
|    | Superstructure                                    |
|    | Rated lifting load                                |
|    | Counterweight                                     |
|    | Slewing radius of variable-position counterweight |
|    | Hook block                                        |
|   | Parts of line                                     |
|  | Boom length combination                           |
|  | Wind speed                                        |
|  | Configuration                                     |
|  | Optional equipment                                |
|  | Rope length                                       |
|  | Wire rope diameter                                |

|                                                                                     |                          |
|-------------------------------------------------------------------------------------|--------------------------|
|    | Boom                     |
|    | Boom length              |
|    | Boom working radius      |
|    | Lifting height with boom |
|    | Boom angle               |
|   | Extension                |
|  | Independent jib head     |
|  | Simple jib head          |
|  | Fixed jib                |
|  | Fixed jib length         |
|  | Fixed jib offset angle   |
|  | Luffing jib              |



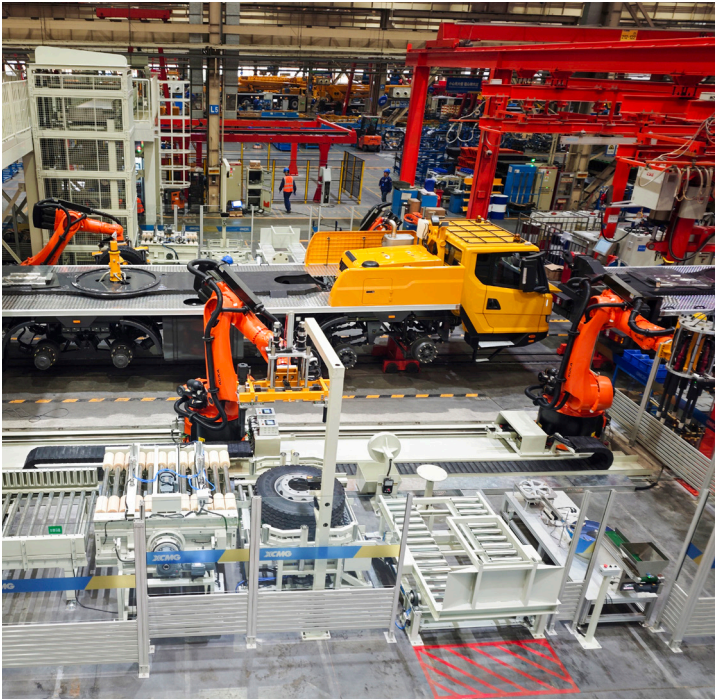
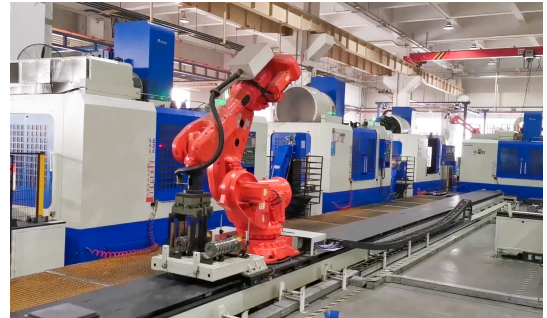
## DESCRIPTION OF SYMBOLS

|                                                                                     |                             |
|-------------------------------------------------------------------------------------|-----------------------------|
|    | Breaking force of wire rope |
|    | Max. working speed          |
|    | Main winch                  |
|    | Auxiliary winch             |
|    | Chassis                     |
|   | Outrigger span              |
|  | Tire                        |
|  | Axle load                   |
|  | Grade ability               |
|  | Travel speed                |
|  | Luffing                     |

|                                                                                     |                                                    |
|-------------------------------------------------------------------------------------|----------------------------------------------------|
|    | Maximum lifting height                             |
|    | Maximum working radius                             |
|    | Super lift                                         |
|    | Wind power jib                                     |
|    | Telescoping                                        |
|   | Slewing                                            |
|  | 360° operation of the boom                         |
|  | With the 5th jack down, 360° operation of the boom |
|  | Side and rear slewing                              |
|  | Boom over front or over rear                       |
|  | Standard                                           |

**INTELLIGENT QUALITY MANUFACTURING**

- Driven by digital models, we have implemented leading intelligent quality manufacturing technologies, integrating process simulation and simulation technology, creating a high-end manufacturing platform that combines manufacturing and process.

**INTELLIGENT ASSEMBLING****DIGITIZED CORE COMPONENTS WORKSHOP****UNMANNED AUTOMATIC WELDING****SPRAYING PROCESS OF ROBOTS****DIGITIZED STRUCTURE WORKSHOP**



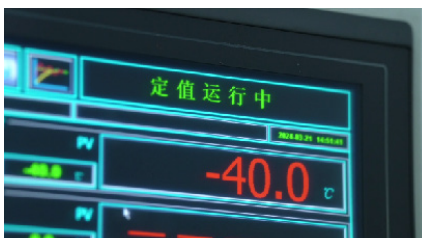
# SAFE AND RELIABLE

G-SAFE LIFE CYCLE SAFE QUALITY

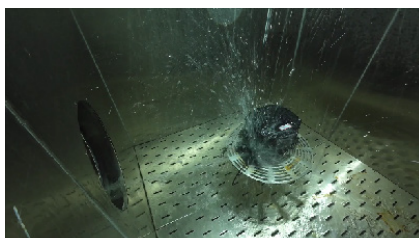
## PARTS AND COMPLETE MACHINE TESTING

- Each technology and component is restructured to meet the most stringent quality inspection standards.
- Each complete machine undergoes rigorous testing and a large number of experiments to ensure reliable operation in various complex environments.

## OVER 2,000 COMPONENTS OF 123 KINDS UNDER 5 CATEGORIES



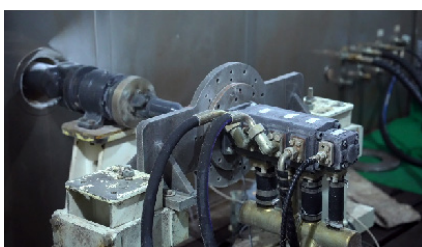
HMI display  
Low-temperature performance test under -40°C



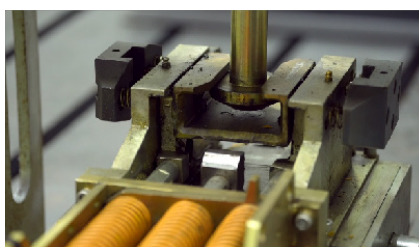
Length measurement sensor  
48-hour rain-proof test



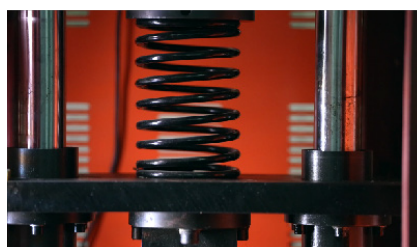
Panel buttons  
1.2 million times reliability test



Hydraulic oil pump  
Low-temperature performance test under -40°C



Telescoping mechanism  
Smoothness test



Telescoping mechanism  
Smoothness test

## 178 FULL-SCALE LIMIT TESTS ON THE COMPLETE MACHINE



Passability



Climbing & Hill holding



Dynamic & Static lifting





[illegible]

## NOTES

- ✔ The document is intended as reference only. It is only a guide and should not be used to operate the crane. See product manuals for correct operation instructions.
- ✔ 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.
- ✔ The working radius is the horizontal gravity center distance of the load from the rotational axis of the crane superstructure measured at the ground.
- ✔ 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.
- ✔ 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 125 N/m<sup>2</sup>).



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