Early in 2003, Xuzhou Heavy Machinery Co. Ltd launched the truck crane of 100-tonnage. Today, QY100K/QY130K Truck Crane, with Pro/E design, produced by precise machines and equipment and through simulation tests for reliability, ranks the first in truck cranes of 100-class.

Non-faulty manufactures: using pre-assembly technique of computer simulation for each process ensures the product quality. Now, 100K/130K use computer simulation pre-assembly before production, ensure high work efficiency for the crane.

Good Intelligence: PLC integrated control system—all electronic signals of key electronic components are processed by computer therefore make crane operation easier and more convenient, working safety, reliability and efficiency are improved greatly.

Cost energy: constant power and variable displacement system—combined with integrated controller automatically adjust system output and pressure based on load variation, precise and smart control of speed.

Durability: powerful construction machinery engines—imported Volvo engine for crane superstructure ensures long-time smooth operation, imported Cummins and Benz engine for crane carrier provides powerful and durable drive.

High efficiency: 3-axle off-road crane chassis, 100k 3-axles for steering, 130k 4-axles for steering powerful drive easy steering good pass-ability and rapid access to working position.

Excellent performance: avoid profile boom—optimized cross-section minimizes boom weight and maximizes crane lifting capacity.

More convenience: all-round and full vision operator's cab—can be tilted backwards 20°, self-assembly of counter weight—various combined counter weight to meet various working requirements. Optional equipments—centralized lubrication unit, jib, single sheave on boom tip, anti-ultraviolet ray glass, radio-cassette recorder, etc.
Optimized and upgraded winch system

- Two independently-operated winches
- Built-in slide pad
- Compact boom head
- Boom height adjusting device

- Optimized oviform profile with thin upper plate and thick lower plate made of imported WELDOX 960 high-tensile steel.
- Maximised boom strength, strengthened partial stability of bottom plate and belly plate.
- Maximized the mechanics performance of material.
- Optimized each boom section head used built-in slide pads.
- 130K ensure compact overall dimension, and also increase the joint length of fully extended boom sections and reduce boom deflection.
Incomparable lifting performance represent on each work mode.

QY130K, 6-section boom, max. boom length up to 58m.
QY100K, 5-section boom, max. boom length up to 48m.

Remote control of counterweight

- Curved counterweight tail reduces swing radius
- Self-assembly of counterweight
- Counterweight remote controller

QY100K
Max. load moment 2734kN\cdot m without counterweight
Max. load moment 3058kN\cdot m with 6.3t counterweight
Max. load moment 3230kN\cdot m with 14.3t counterweight
Max. load moment 3460kN\cdot m with 15.2t counterweight

QY130K
Max. load moment 3959kN\cdot m without counterweight
Max. load moment 4214kN\cdot m with 13t counterweight
Max. load moment 4586kN\cdot m with 20t counterweight
Max. load moment 4704kN\cdot m with 27t counterweight
Max. load moment 5003kN\cdot m with 35t counterweight
PLC Computer Integrated Control System:

1. Sensor
2. Load moment limiter
3. Executive component
4. Electric proportional valve
5. Executive component
6. Executive component
7. Control handle
8. Control switch
9. Display regulator
10. Broad screen display 1
11. Broad screen display 2

Hydraulic System:
- Imported female-type pipe joints, free of leakage and anti-pollution
- Effective hydraulic oil cooling system
- Variable hydraulic system of cost energy and high efficiency for hoist (Patent No. 01237657.4)
- Hydraulic system of shockproof self-alignment for swing (Patent No. 03210287.3)
- Imported pump, motor, valves and sealing with excellent performance and reliability
- Integrated modular valve block with simple pipeline and less hydraulic resistance (Patent No.: 012044408.8)

Lifting operation part is controlled by PLC computer integrated controller for construction machinery. Control signals and operating performance chart can be set and adjusted with digital data. The control system, combined with variable-displacement hydraulic system, can automatically and accurately adjust its output and pressure based on load variation, therefore makes crane control and operation smooth and precise.

- Free of maintenance
- Imported electronic components
- Failure diagnostic function
- Real-time monitoring function
- Convenient and accurate operating performance
Operator's cab tilted backwards: It has better sight of view especially suitable for lifting operation with long boom length. The overall vehicle layout, outline and two cabs are newly designed with 3D modular and ergonomic principle, which greatly improve the comfort and maintenance for the whole machine.

- Controllable free-swing for swing drive unit: swing drive unit uses planetary gear reducer and constant-closed brake driven by motor meshed with outer coupling slowing ring. A damping valve is fitted in the hydraulic system for free-swing and smooth fine motion control.

Comfortable driver's cab for construction machinery:

- Integrated and streamlined cab body made of compound material.
- Curved and integrated front window, free of dead space of view.
- Implement complete operation by softly touching the pilot handle
- Reasonable internal decoration, good sound isolation
- Adjustable and vibration-proof driver's seat
- Adjustable steering wheel
- Electrical side window glass lifter
- Automatic defrosting
- CD player

Streamlined upper cabin cab made of compound material can be tilted backwards 20°

Back-up device with large sight view

Centralized lubrication device
We have the ability of fast job-site transfer.

**QY130K Chassis Steering System Diagram**

- 4-axle steering and 3-axle drive
- The crane carrier is 6-axle special crane chassis, drive type 12×6 (axle 3rd, 5th and 6th for drive), steering type 12×8 (axle 1st, 2nd, 3rd and 6th for steering). Little turning radius, minimum turning diameter less than 24m, imported ZF automatic shifting transmission and transfer case and imported German drive axle, powerful off-road travel performance.

**QY100K Chassis Steering System Diagram**

- Min. turning diameter 24m
- Steering:
  - 3-axle drive and 3-axle steering
  - Min. turning diameter 24m
  - Max. grade-ability 40%

Independent power system for crane superstructure, new type VOLVO water-cooled and turbocharged diesel engine, low speed, powerful output, strong torque and high working efficiency. Engine output is controlled by the computer integrated control system and CAN-BUS data line and optimized power output depend on boom load variation, which minimize engine power loss and save energy. The crane carrier uses Benz electronic injection engine with emission nder to Euro III standard, advanced performance and powerful drive.
**QY130K Main Technical Data in Travel State**

**Dimensions**
- (L × W × H): 14900 × 3000 × 3650 mm
- Wheel space:
  - 1st, 2nd axle: 1420 mm
  - 3rd, 4th axle: 1817 mm
  - 5th, 6th axle: 1400 mm
  - Track: 2610/2307 mm

**Power**
- Superstructure engine:
  - Engine rated output: 1622/2100 kW (r/min)
  - Engine rated torque: 854/1400 N·m (r/min)
- Max travel speed: 2100 m/min

**Carrier engine**
- Engine rated output: 390/1800 kW (r/min)
- Engine rated torque: 2400/1080 N·m (r/min)
- Max travel speed: 1800 m/min

**Weight**
- Dead weight in travel state: 54900 kg
- Axle load:
  - 1st, 2nd axle: 6800 kg
  - 3rd, 4th axle: 9600 kg
  - 5th, 6th axle: 10780 kg

**Travel**
- Max travel speed: 70 km/h
- Min turning diameter: 24 m
- Min ground clearance: 275 mm

**Approach angle/Departure angle**: 23°/14°

**Max grade ability**: 40%

**Fuel consumption of 100 km**: 80 L

**QY100K Main Technical Data in Travel State**

**Dimensions**
- (L × W × H): 15230 × 3000 × 3980 mm
- Wheel space:
  - 1st, 2nd axle: 1420 mm
  - 3rd, 4th axle: 1817 mm
  - 5th, 6th axle: 1400 mm
  - Track: 2610/2307 mm

**Power**
- Engine rated output: 324/480 (356/1800) kW (r/min)
- Engine rated torque: 2105/1505 (261/1300) N·m (r/min)
- Max speed: 1800 (1900) m/min
- Min ground clearance: 310 mm

**Weight**
- Dead weight in travel state: 58000 kg
- Axle load:
  - 1st axle: 7000 kg
  - 2nd axle: 7000 kg
  - 3rd axle: 9000 kg
  - 4th axle: 12000 kg
  - 5th axle: 12000 kg
  - 6th axle: 7100 kg

**Travel**
- Approach angle: 23°
- Departure angle: 15°
- Braking distance (at 30 km/h): <10 m
- Max grade ability: 40%
- Min turning diameter: 24 m
- Fuel consumption of 100 km: 70 L

**QY100K Main Technical Data For Lifting Operation**

**Lifting performance**
- Max rated lifting capacity: 100 t
- Max rated working radius: 3 m
- Turning radius at swing table tail: 4200 mm

**Working speed**
- Boom elevating time: 80 s
- Boom telescoping time:
  - Full extending/Retracting: 420/400 s
  - Max swing speed: 1.9 m/min
- Outrigger extending and retracting time:
  - Outrigger beam extending/retracting: 85/40 s
  - Outrigger jack extending/retracting: 85/40 s
- Hoisting speed (single rope, 4th layer):
  - Main winch: 115 m/min
  - Aux winch: 115 m/min

**Jib offset**
- 0 °, 15 °, 30 °

**Jib offset**
- 0 °, 15 °, 30 °

**Boom elevating time**
- 75 s

**Boom telescoping time**
- 180 s

**Max swing speed**
- 2 m/min

**Outrigger extending and retracting time**
- 25/15 s

**Outrigger beam extending/retracting**
- 45/25 s

**Main winch**
- 105 m/min

**Aux winch**
- 104 m/min