

TRUCK-MOUNTED CONCRETE BOOM PUMP

VISION CREATES FUTURE

ZOOMLION

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

ZOOMLION

BENCHMARK POSITION



INNOVATION LEADERSHIP

The World's Longest 101m Carbon Fiber Boom Pump Truck- Guinness World Record holder.

80m Carbon Fiber Boom Pump Truck won the Guinness World Record in 2011.

101m Carbon Fiber Boom Pump Truck set a new record in 2012 and remains so far.

INDUSTRY-LEADING INNOVATION

1156 valid patents

592 invention patents

10 patent families for international inventions

The Secretariat Unit of ISO/TC96 for standard setting



Published the first international standard in the industry

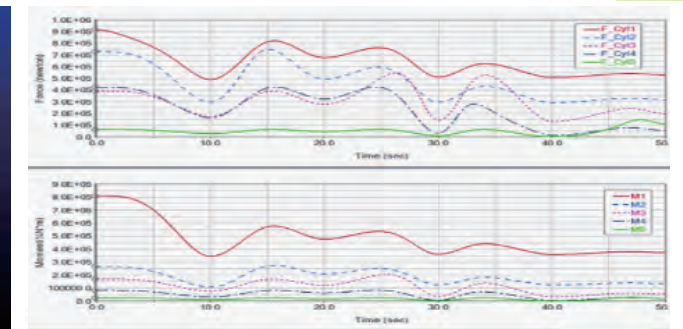
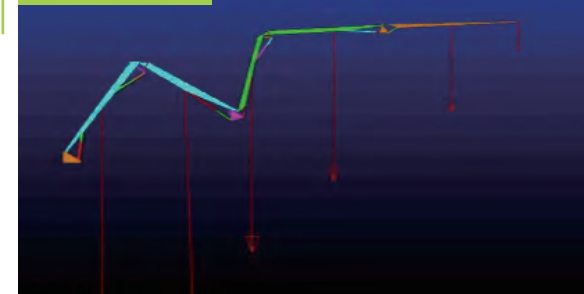
INDUSTRY-LEADING DESIGN AND TESTING

The industry-only National Engineering Research Center of Concrete Machinery

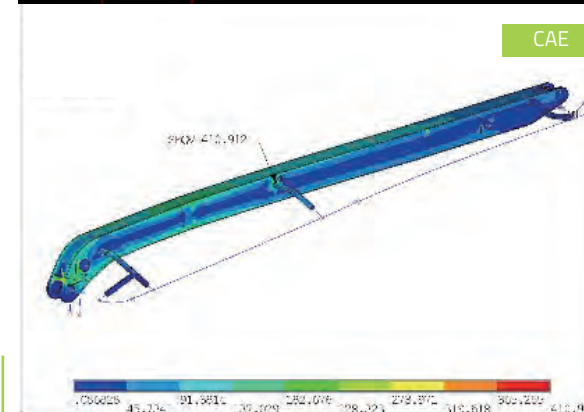
With a world-class digital simulation team for structural strength, stiffness, vibration, fatigue, fluid, and lightweight to carry out the forward design of products efficiently, accurately, and reliably



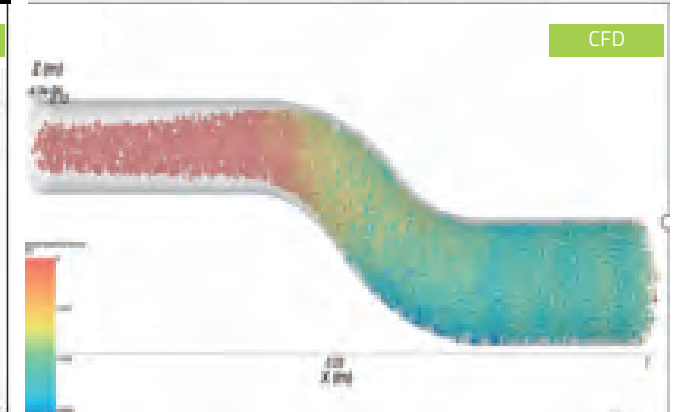
Multibody analysis



CAE



CFD



BENCHMARK POSITION

- Intelligent Manufacturing- Zoomlion Smart Industry Park
- The world's largest and most diverse construction machinery industrial base
- A Globally leading efficient factory, ecological park, and smart city

32
Intelligent
Production Lines

6
Dark Unmanned
Operation Areas

200+
Industrial
Robots

210
AGVs for
Automatic Logistics

169
Product Line
Patent Technologies

55
Innovative
Technologies

The industry's most advanced intelligent manufacturing park for concrete pumping machinery.

The largest capacity: 45% reduction in production cycle.

Reliable manufacturing: dark unmanned machining, fully automatic welding, intelligent assembly, etc., to ensure high quality and reliability of products.

27min/set
Manufacturing of boom pump trucks

≥90 %
Automation rate of key processes



Intelligent Painting Line



Intelligent Welding Line



Intelligent Assembly Line



Intelligent Warehousing Logistics



Dark Unmanned Machining Line

PRODUCT FEATURES



USER-FRIENDLY

To Operate
To Maintain
To Clean



RELIABLE

Structure
Wearing Parts
Hydraulic And Electrical
Systems



SAFE

Driving
Construction



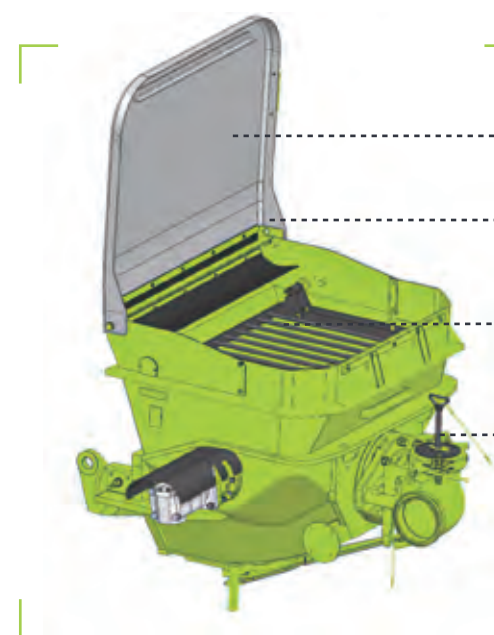
INTELLIGENT

Intelligent
Manageable



PRODUCT FEATURES - EASY TO USE

Optimized design to avoid aggregate or leakage, worry free cleaning after construction in high thermal environments.



Hopper cover

- Made of lightweight aluminum alloy

Rubber mudguard

- Prevent leakage through the gap in the hopper cover during pumping

Grill

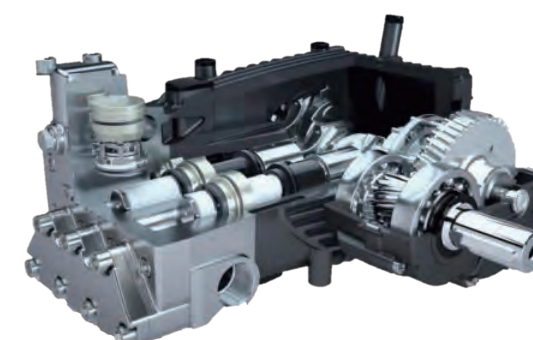
- Bar-type grill for feeding quickly and easily without aggregate

Cleaning ball stopper

- Prevent cleaning balls from being sucked into the S-pipe and cut off by the cutting ring

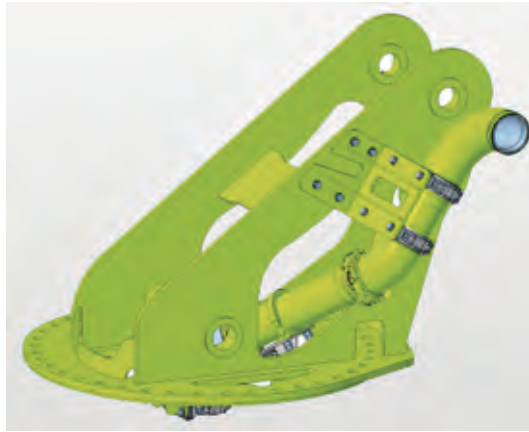
EASY CLEANING

- High-low Pressure water pump, cleaning efficiently without blind spots, it is equipped with compressed air cleaning an diesel spray , and large capacity water tank well supplied with water for multi-site construction, making it convenient for transfer
- High flow rate water pump (55-70) L/min
- High pressure water pump 20MPa
- Compressed air cleaning
- Diesel spray



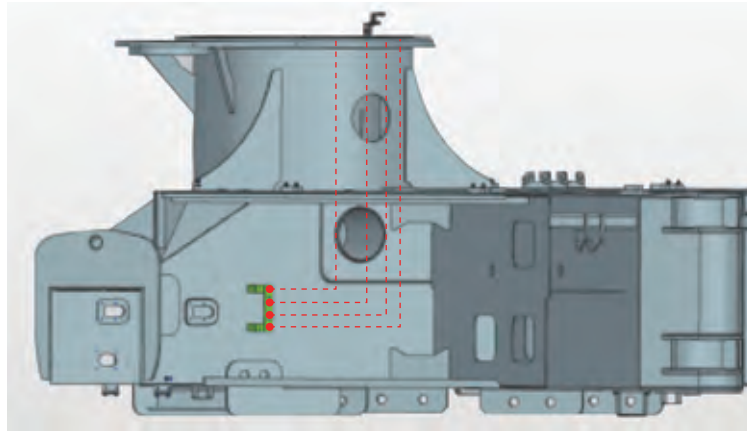
EASY MAINTENANCE

User-friendly and generalization design for convenient maintenance.



Optimized slewing table structure

Externalized delivery pipe with a 20% increase in strength. Less time for replacing the delivery pipe from 3h to 1h.



Central lubricating

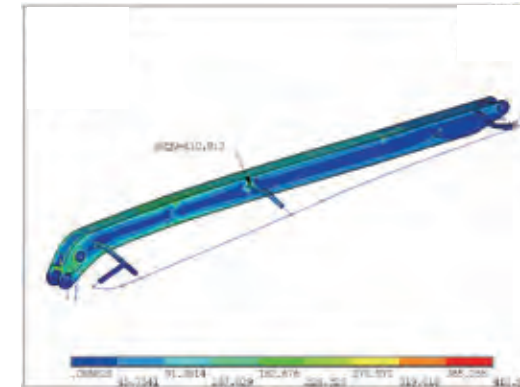
Slewing bearing lubrication point externally centralized to the triangle area of the pedestal, convenient for grease filling.

PRODUCT FEATURES - RELIABLE

RELIABLE STRUCTURE

Long fatigue life of boom and pedestal structures

Designed structural components according to European fatigue design standard; the boom and the main structures of pedestal passed the bench fatigue test by pumping 450,000 cubic meters of concrete.



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Fatigue test bench

Upgraded boom shaft sleeve

Integral structure: no welding required, no welding deformation, easy assembly and disassembly.



STABLE BOOM

Dual damping systems of boom in vertical direction and slewing, making the boom stable.

Boom active vibration control technology, reducing impact by more than 30% at key parts of the boom. The vertical amplitude at the end of the boom reduced by 30% and the slewing amplitude reduced by 80%.



RELIABLE HYDRAULICS

Major hydraulic components such as **hydraulic pumps**, **hydraulic valves**, **hydraulic cylinders**, and **hydraulic pipelines** have passed the rigorous environmental adaptation and durability tests to ensure the reliability of the components.



hydraulic pump



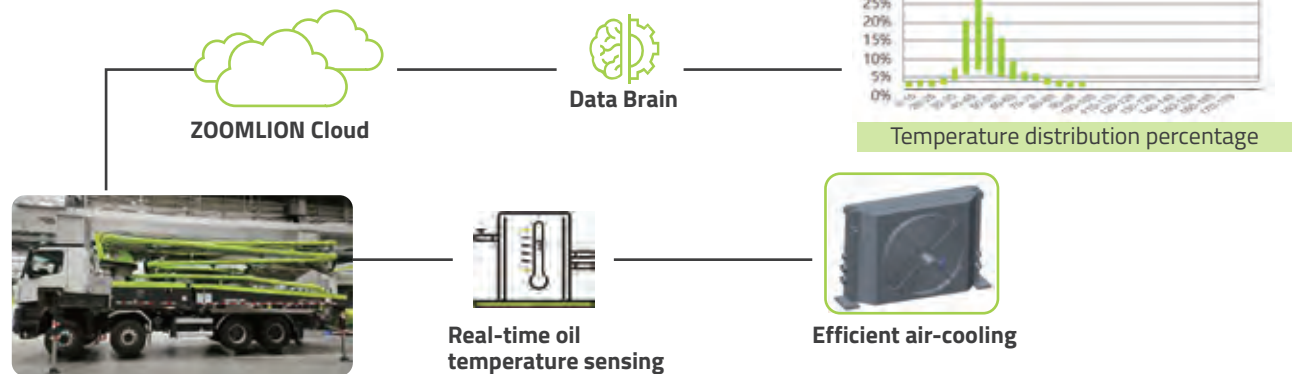
hydraulic valve



Integrated test bench for hydraulic pumps, hydraulic cylinders, and hydraulic valves

RELIABLE HYDRAULICS

The low-energy and long-life air-cooling radiator based on intelligent control technology, controls the oil temperature in the optimal working range of 40 °C ~65°C, ensuring the reliability of the systems during construction in high thermal environments.



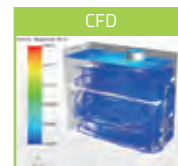
RELIABLE HYDRAULICS

Independent oil tank, less hydraulic oil consumption, long service life, low equipment operating costs.

The **best match** between hydraulic oil tank capacity and system performance through hydrodynamic analysis, reducing generally the hydraulic oil consumption by 30%;

The unique oil tank structure integrated chamber and grid, slowing the flow, eliminating air bubbles and reducing cavitation to improve system efficiency and **prolong the service life of hydraulic oil**;

The system with dual independent tanks, extending the maintenance period of hydraulic oil of boom system more than twice as much and reducing the operating cost.



CFD



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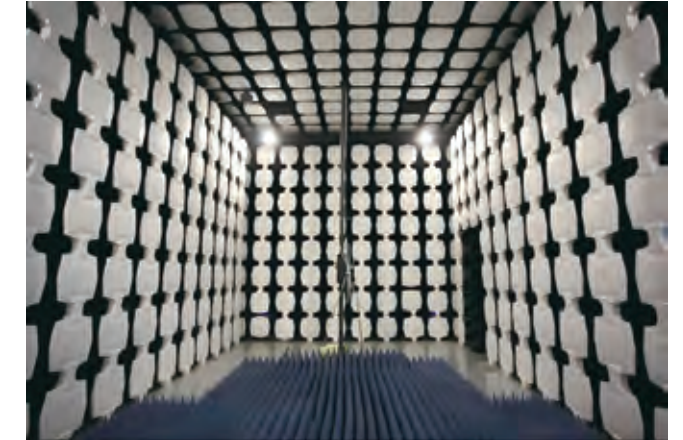


Boom oil tank

Pumping oil tank

RELIABLE ELECTRICAL

Major electrical components such as controllers, remote controls, displays, circuit boards, and sensors have passed the rigorous environmental adaptation, electro magnetic compatibility (EMC), and durability tests to ensure the reliability of the components.

3-in-1 integrated test bench
(for vibration, temperature, and humidity)

EMC test chamber

RELIABLE ELECTRICAL

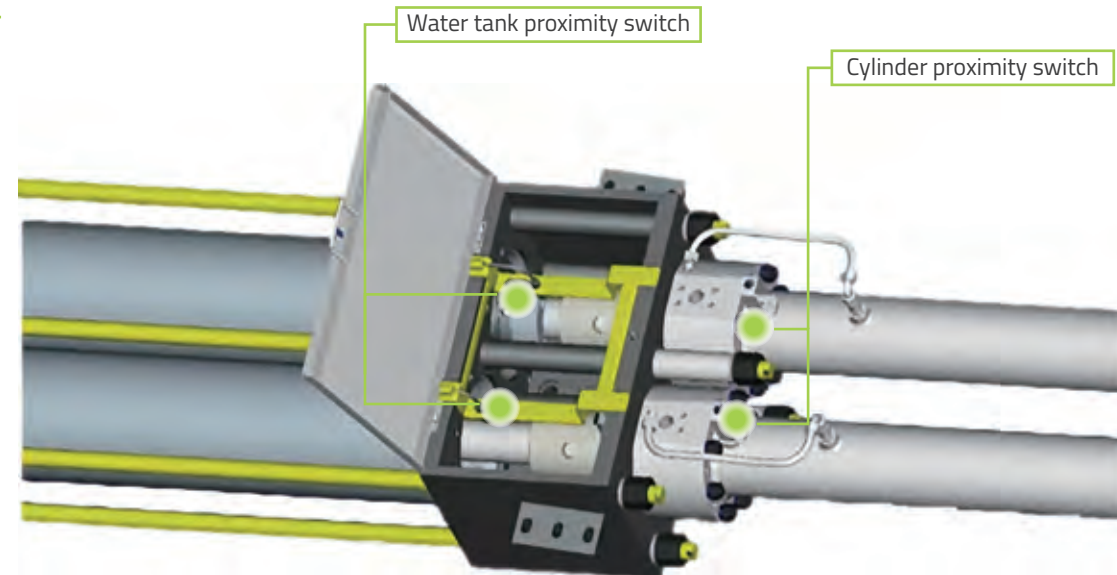
HBC remote control, equipped with automatic frequency management system (AFS), enables the wireless communication distance of the remoter to be >100m.

Remote start
Remote stop2100mA lithium
battery life>10h

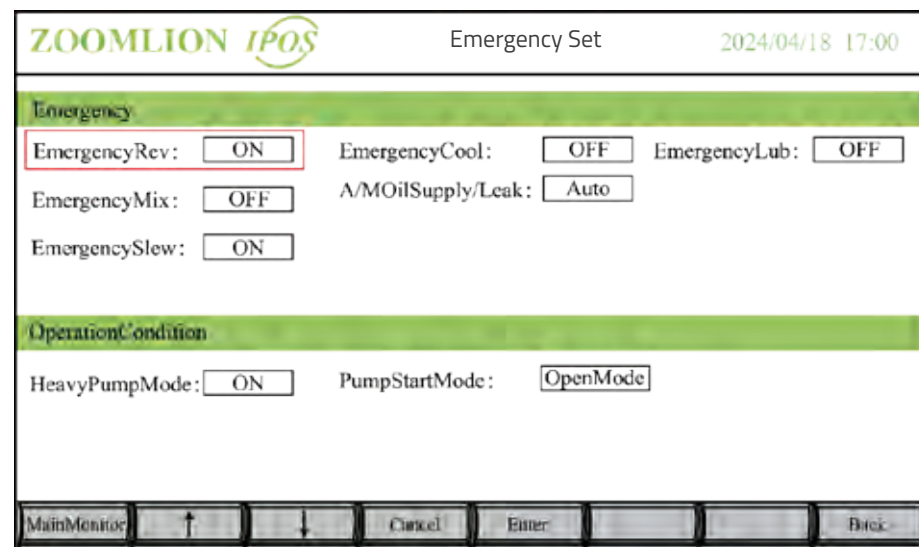
Reliable Electrical

Pumping trouble emergency changeover system, can learn, can adapt

Self-learning and self-adaptive intelligent technology based, can still be pumping even if the proximity switch or displacement sensor fails



Redundant design of reversing sensor

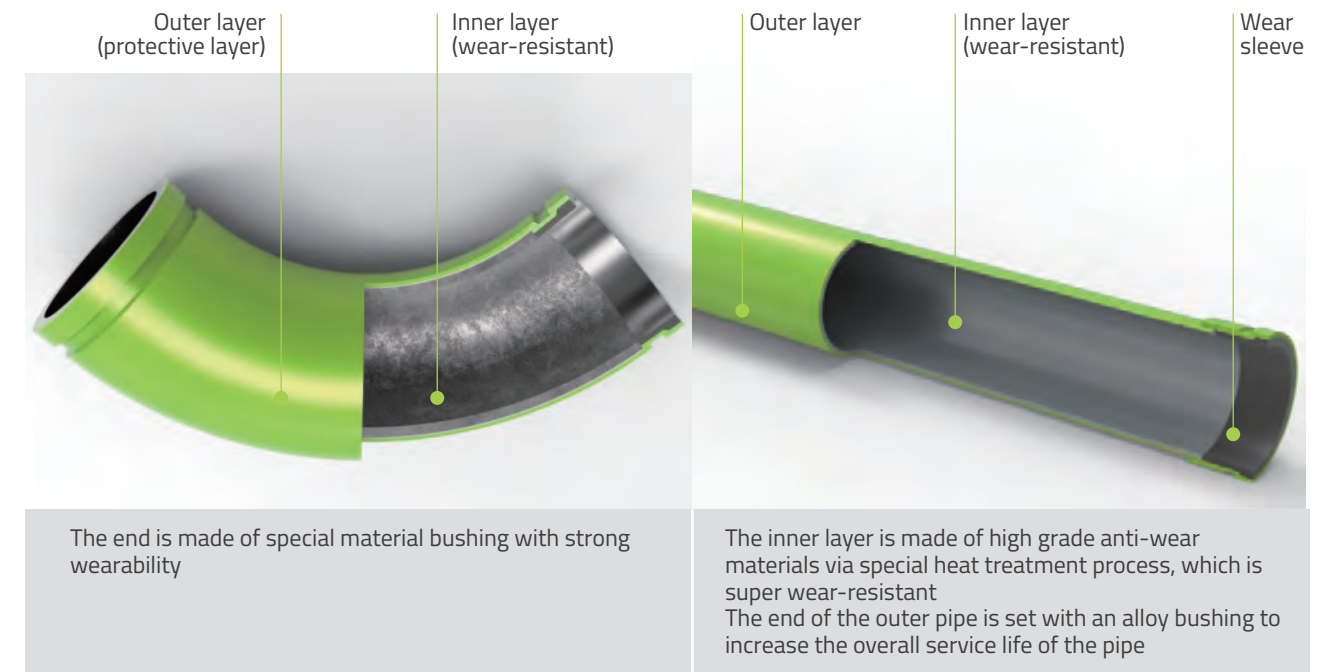


Emergency function setting of control panel

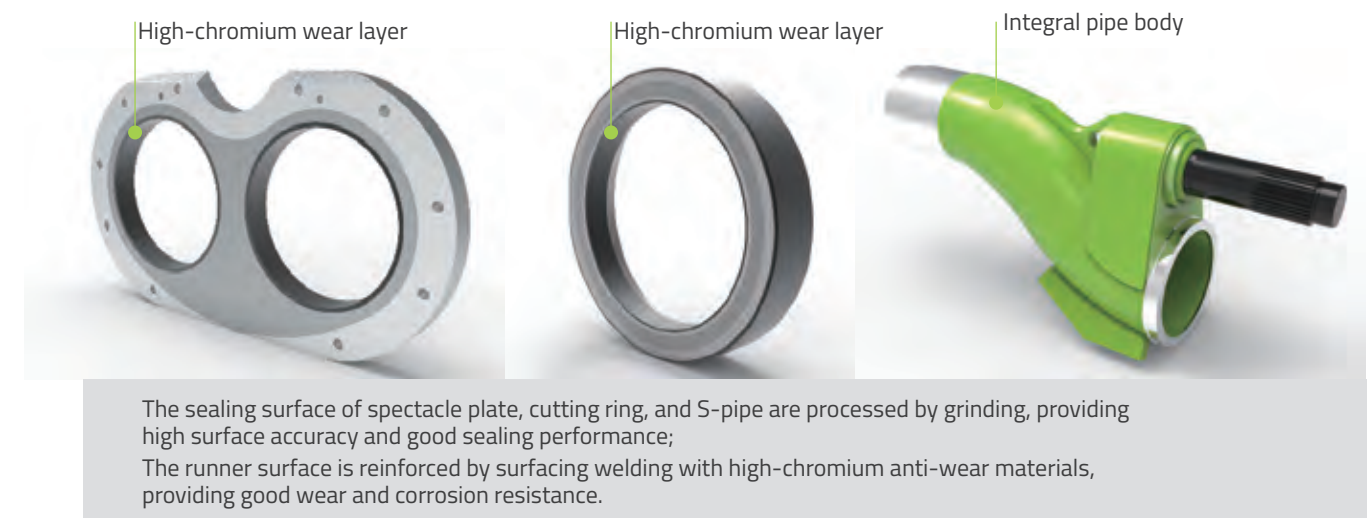
PRODUCT FEATURES- ECONOMICAL

LONG SERVICE LIFE OF WEARING PARTS

Pipes with long service life and great versatility



S-pipe, spectacle plate, and cutting ring with long service life and good sealing performance



The piston with strong adaptability to working conditions and long service life

High-performance piston materials with low frictional resistance and strong compressive strength;
The structure design of lubrication cavity to ensure effective lubrication;
One-piece molding process for high dimensional accuracy and good sealing performance.



PRODUCT FEATURES- SAFE

360° panoramic image around the truck pump+OGS

360° panoramic image around the truck pump

1 Driver Assistance



Multimedia touch screen in cab



Real-time HD display

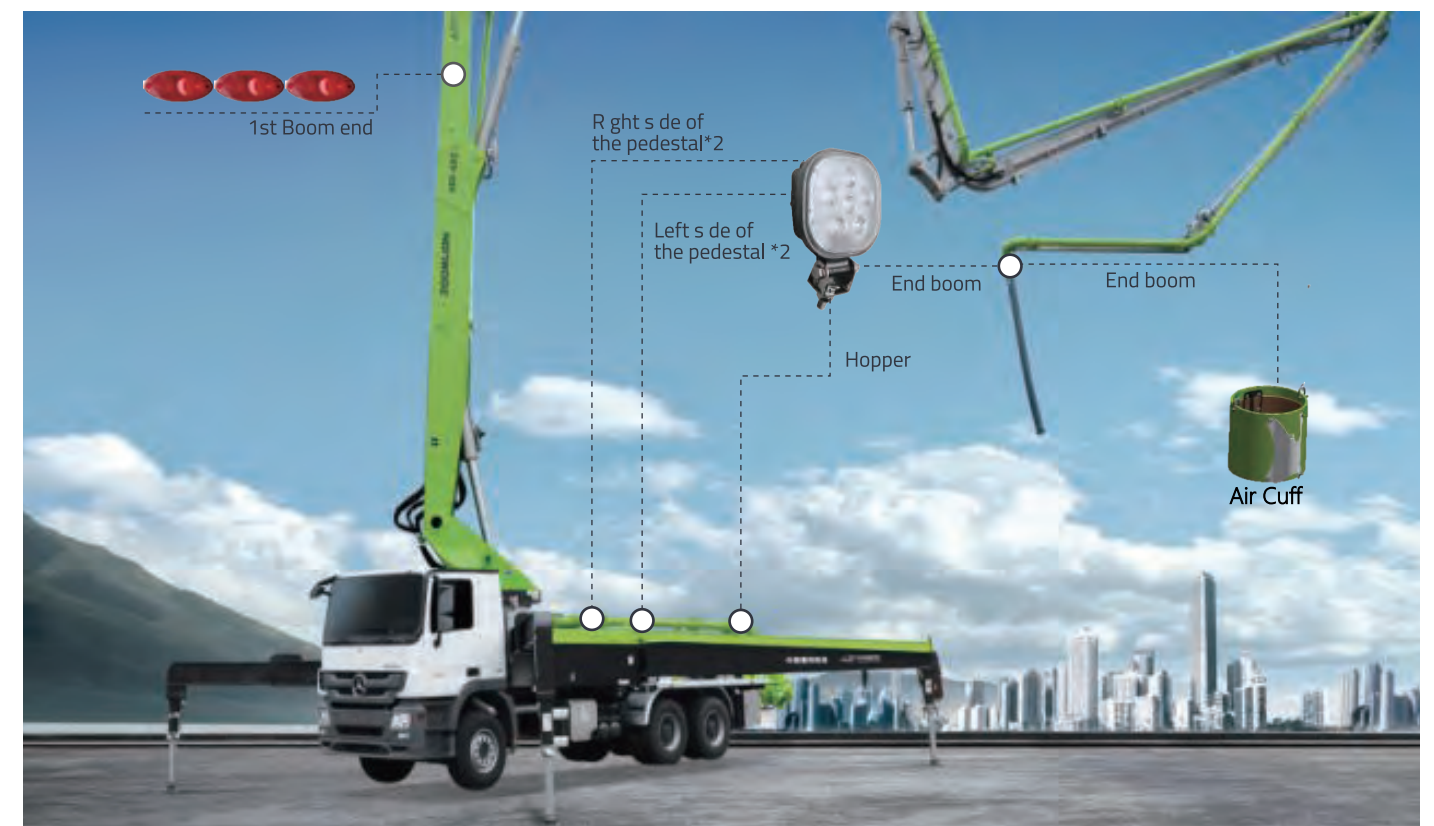
Based on the high-definition cameras, it is able to display the 360° panoramic HD video with touch interaction, and to record and view the historical video locally so as to assist in the operation during driving.



2 (OGS) Outriggers guidance system

SAFER

Standard configuration of side searchlights and warning lights as intense light source, making nighttime construction safer

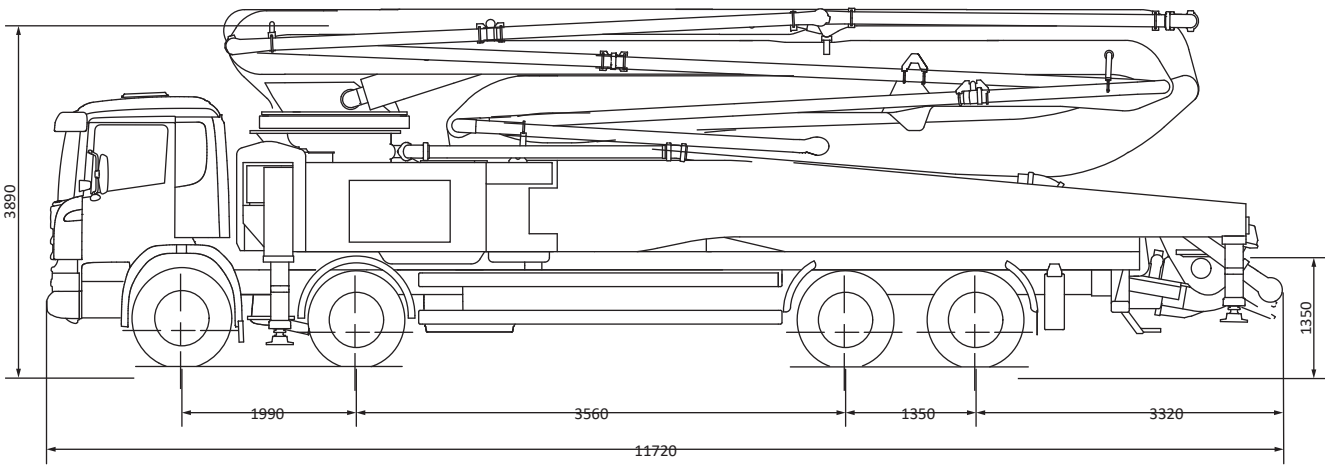


TRUCK MOUNTED CONCRETE PUMP 43X-5RZ

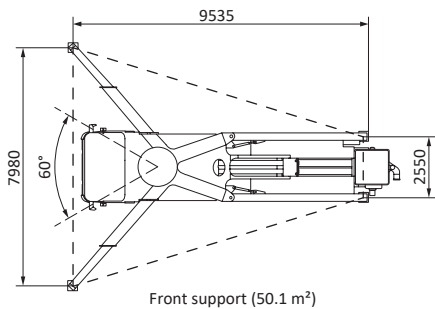
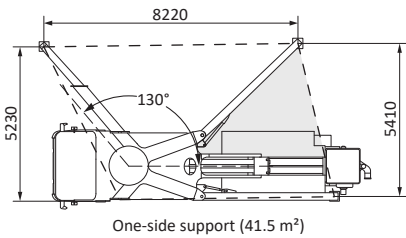
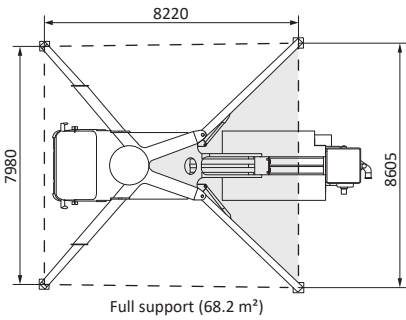
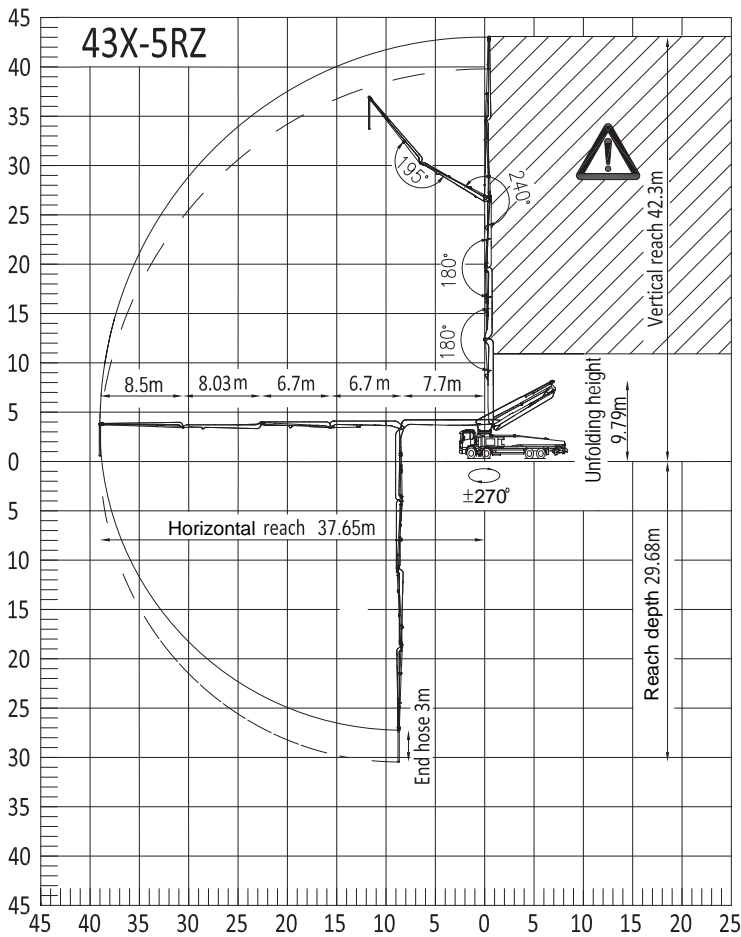


PARAMETER

BOOM		
Vertical reach	m	42.3
Horizontal reach	m	37.7
Reach depth	m	29.7
Min. height of unfolding boom	m	9.8
PUMP		
Max. theoretical output	m ³ /h	170
Max. theoretical concrete output pressure	bar	88
Concrete cylinder dia × stroke	mm	Φ260×2100
CHASSIS		
Chassis brand	SCANIA P 500 ×4	
Engine power	kW	368
Emission standard	Euro 6	



Note: Dimensions varying according to truck assembly (mm).
For illustration only



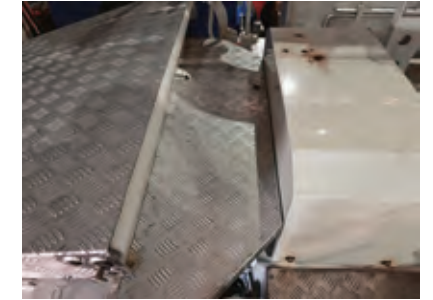
PRODUCT HIGHLIGHTS



New HBC Remote



Aluminum alloy Hopper Cover



Swing Cylinder Guard



360 View



Hose Reel



Hose Recovery Self-locking Device



Boom Searchlight

Boom Support
Warning Light

Hose Support



High Pressure Water Pump



Centralized Lubrication System

Electric Whistle & Vibrating
Motor Buttons on Both Sides
of HopperEmergency Button &
Water Pump Button on
Both Sides of Hopper

Outrigger Searchlight



Air Washing Device

CONSTRUCTION CASES



SERVICE SYSTEMS

QUICK RESPONSE

Localization

Local service team provides high-valued repairs and maintenance service and technical support as and when required.
Local stock of a wide range of service exchange parts.
Fastest response to service & spare parts.

Customization

Customized colour painting.
Optional configurations.
Customized service solution and extended warranty package.

Training & delivery

Operation and maintenance training when delivery.
Pre-delivery inspection.
Annual inspection.



ABOUT ZOOMLION

1. Zoomlion is one of the world's largest concrete equipment manufacturers and leaders in developing and manufacturing of major high-tech equipment.
2. Manufacturing enterprise integrating engineering machinery, agricultural machinery and financial services.
3. Possessing 11 major categories and 70 product lines, as well as nearly 568 leading products.
4. Based on the national research institute with 64 years history.
5. Annual sales turnover is more than 6 billion USD.
6. More than 20,000 staff working for Zoomlion globally.
7. Holding over 75% technology innovation patents in the industry in China now.
8. 22 industrial parks all over the world (13 in China, 9 in other countries).
9. The only drafter of the ISO Technical Committee of ISO in China.
10. Drafted 200 national industrial standards.

