

Creating a Better Future



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01 SAFETY AND RELIABLITY

Safe: Human-Vehicle Protection, Safety First

Rollover Protective Structure (ROPS)/
Rollover Protection

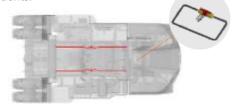
Safety: Protecting both people and vehicles; Safety First.

360° Panoramic Camera

The blind spots around the vehicle can be seen on the screen with 360 panoramic camera and the correct decision can be made to avoid accidents.

■ Automatic Fire Extinguishing System

Layout temperature monitoring sensors around the engine to monitor the temperature and smog inside the engine compartment in real time to alarm and automatic fire extinguishing , thus protecting both people and vehicles and avoiding accidents.

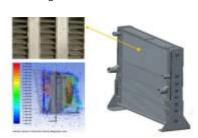


The fuel system is cleaner, and the life of power

Reliability: Inheriting LiuGong's gene of Durability

■ Single-layer Large Pitch Radiator

The overall layout design of the radiator through simulation technology aims to realize the sustainable operation ability of the radiator in high temperatures, high dust and other working environments.



■ Aluminum Alloy Fuel Tank

elements is longer.



Optimization of Rear Axle Steering Mechanism
Optimizing the dual-energy steering angle deviation through
simulation technology reduce the steering angle deviation rate by
90% and extend the tire life by 0.5 times.



Stress Analysis and Improvement of Vehicle Structure

Adhering to LiuGong's design concept of powerful equipment under extreme working conditions, a stress simulation analysis has been conducted on the whole vehicle structure to achieve equipment durability.



Durable Core Components

Depending on over 30-year cooperation with LiuGong, world-famous components suppliers offer reliable products for LiuGong based on the condition-adaptability-oriented concept.



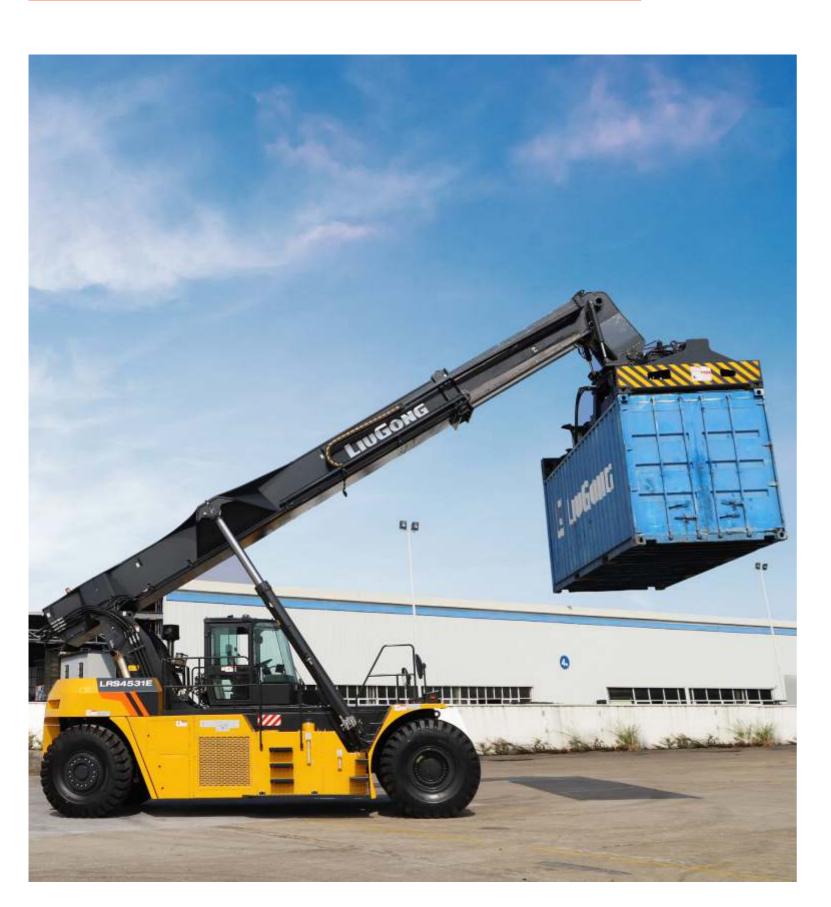








02 **SMART AND EFFICIENT**



HUMAN-MACHINE INTELLIGENT, STABILITY AND EFFICIENCY

Power System Matching Technology
By simulating and matching the complete power system (working habits + engine + gearbox), the power matching is optimized, and the controller, handle, pump and valve are combined with the dynamic power matching system to shorten the system response time from 0.7s to 0.2s, the power output is more stable, and the operating efficiency of the hanging box is increased by 6%, thereby achieving more stable power output and improving the efficiency of box lifting by 6%.

■ Electric-Control Load Sensing Hydraulic System

High-efficiency e-control & pilot-operated proportional valves enable the vehicle to receive an instantaneous response and high-efficiency and stable self-automatic operation under work conditions.

■ Vertical Lift Technology

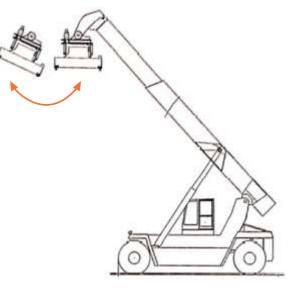
This system monitors and automatically calculates the angle and weight of the container hoisting in real-time and starts the compound action of boom lifting and telescoping with one button to realize the vertical lifting operation mode of the container hoisting. Significantly improve the efficiency of cross-container, train loading and unloading and other related operations.



Adaptive Anti-swing Damping **Regulation Technology**

The system monitors the actual status of the container hoisting operation in real time, adjusts the swing range of the container, and improves the efficiency of container hoisting.





03 **COMFORT AND CONVENIENCE**

DRIVING EXPERIENCE FROM FIRST-CLASS CAB, ONE-STOP MAINTENANCE

Electric Mobile Cab

One-button operation can conveniently and quickly adjust the field of view and angle. Angle in the cab. The starter battery can be turned on, and the cab can be moved by operating the button under off-vehicle condition. This technology is the first innovative technology put into use in China.



Quiet and Comfortable Driving Space

The noise around the driver's ear is less than or equal to 70dB, which is better than that of the same industry.



■ All-Rund illuminating

Working lights are well set on the front, rear, boom and slings for lifting loads to meet all the needs of various operating condition.



One-stop Maintenance

Equipped with ladder aisles on the left and right sides + access doors on the side, This layout configuration does not require trenches to enter the interior of the vehicle body for maintenance of engine, gearbox, transmission components and other components + replacement of external maintenance parts + centralized maintenance of electric control cabinets.

Left side:



Right side:



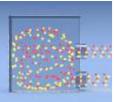
Since there is an inspection door on the side, no trench is required for inspection. to enter the interior of the vehicle body for maintenance of

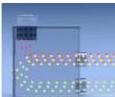
engine, gearbox, transmission components and other components

04 **ENERGY CONSERVATION AND ENVIRONMENT PROTECTION**

Careful Calculation and Strict Budgeting for Customer

LiuGong Patent Hydraulic Defoaming Technology Prolonged oil change intervals; Reduced maintenance costs; The defoaming rate is up to 95%, can improve the reliability of hydraulic components by reducing the cavitation erosion.





with Defoaming System

■ Exclusive Power Curve Adjusting

Cummins exclusively designs power curves for the whole series of LiuGong products based on simulations of different operating conditions to realize the perfect match and produce highefficiency and energysaving products with a 3% reduction in fuel

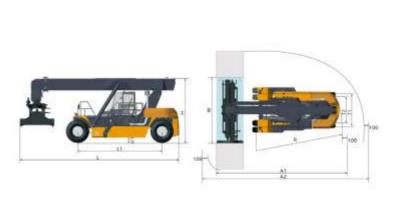
Leading Post-processing Technology
Applying globally-leading Cummins postprocessors to monitor the temperature during the combustion comprehensively, enabling robust self-independent regeneration, lowering the rate of parking regeneration and 5% urea consumption. High-efficiency operation & longer service life, lower urea consumption cost.

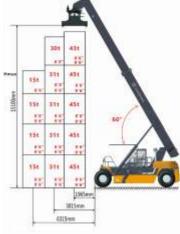


05 **SPECIFICATIONS**

S/N	Technology Parameters	Unit	Model
			LRS4531E
1	Boom Max. Lifting Height	mm	15100
2	Boom tilt	٥	0~60
3	Max. lifting speed (unloaded/full load)	mm/s	420/250
4	Max. lower speed (unloaded//full load)	mm/s	360/300
5	Max. travel speed (unloaded//full load)	km/h	25/22
6	Gradeability (unloaded//full load)	%	40/32
7	Operating weight	t	72
8	Rated carrying capacity	t	45
9	Stacking Layers	-	5
10	Overall Length L	mm	11311
11	Wheelbase L1	mm	6000
12	Overall Height H	mm	4740
13	Minimum ground clearance H1	mm	350
14	Overall width W	mm	6053-12185
15	Front wheel tread T1	mm	3033
16	Rear wheel tread T2	mm	2798
17	Minimum turning radius R	mm	8000
18	20ft container aisle width A1	mm	11300
19	40ft container aisle width A2	mm	13600

06 **DIMENSION**





LRS4531E

07 SPECIFICATIONS

S/N	Technology Parameters		Unit	Model	
				LRS4531E	
1		Model		Cummins X12	
2	Engine	Rated power / speed	kW/rpm	261/2100	
3		Maximum torque / speed	Nm/rpm	1830/1400	
4		Emission Standards	-	Euro III	
5		Transmission Model	-	DANA TE30	
6		Drive Axle Model	-	KesslerD102PL341/ Guangdong Fuhua IVWF0432A0-1	
7		Model	-	LDJ450	
8		Lateral movement distance	mm	±800	
9	ader	Rotating angle	٥	+105/-195	
10	Spreader	Tilt angle	0	±2	
11		Operation Weight	t	8.1	
12		Applicable Objects	-	ISO20'/40'/45' Container	
13		Tire	-	18.00-25 40PR	

08 STANDARD CONFIGURATION

Active Safety Control	Rollover Protective Structure (ROPS)	Heavy-duty Speed Limit	Automatic fire extinguishing system
Adaptive Electronically Controlled Damping Technology	Dynamic Power MatchIng	OPS function	Vertical lift
Quick lift	Automatic weighing system	Telematics system	Manual/automatic shift
Power Cut-off	Engine preheat protection	Temperature Control monitor radiator	CAN bus communication
System Pressure Monitoring	Fault self-diagnosis	Twistlock position monitoring	Twistlock count
Container locating protection	Auto-lock container	Electric mobile cab	Cooling and heating air conditioner
Spreader working condition three- color light inside cab	Co-driver seat with seat belt	Cab reading light	Rear view camera
360° panoramic camera	Cab overhead light	Voice control system	Proximity sensor

09 OPTIONAL CONFIGURATION

Various spreader	Imported spreader	Tire pressure monitoring	Automatic lubrication system
Hydraulic oil heating	Spreader camera monitoring system	Eccentric load alarm system (for railway)	

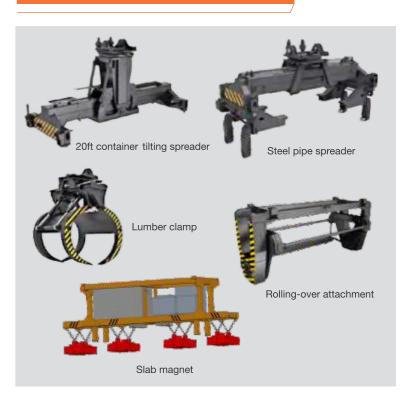
10 **ATTACHMENT OPTIONS**



Standard



Optional



11 CONSTRUCTION CASES







