

855H

WHEEL LOADER

Tier 2 / Stage II



SPECIFICATIONS

Operating weight	16,700 kg
Operating weight includes the machine weight with standard work device, no additional equipment or accessories, full fuel tank, all fluids at required level and an operator 75 kg.	
Bucket capacity	2.6 - 5.2 m³

ENGINE	
Description	
Cummins EPA Tier 2 / EU Stage II-approved, 9.3 liter, 6-cylinder straight turbocharged diesel engine with mechanical direct fuel injection system.	
Cummins efficient fuel filtration system.	
Air cleaning: Whirlwind pre filter, two stage air filter.	
Cooling system: Charge air cooler, direct driven fan and suction type cooling system, single radiator layout.	
Emission rating	EPA Tier 2 / EU Stage II
Make	Cummins
Model	6LT9.3
Engine output - Gross (SAE J1995 / ISO 14396)	162 kW (220 hp) @ 2,200 rpm
Engine output - Net (SAE J1349 / ISO 9249)	149 kW (202 hp) @ 2,200 rpm
Peak torque	890 N·m
Displacement	9.3 L
Number of cylinders	6
Aspiration	Turbocharged

TRANSMISSION	
Description	
Torque converter: double-stage, four elements.	
Transmission: LiuGong BS306 planetary transmission.	
Gear shifting system: Number of speeds, forward-2, reverse-1. Compact, high efficiency, low noise, easy to operate.	
Transmission type	Planetary, power shift
Torque converter	Double stage, four elements
Maximum travel speed, fwd	39 km/h
Maximum travel speed, rev	16.5 km/h
Number of speed, fwd	2
Number of speed, rev	1

BRAKES	
Description	
Two independent brake circuits, accurate control with the main valve & gear pump.	
Service brake type	Caliper discs brake, two independent circuits
Service brake actuation	Air over hydraulic
Parking brake type	Manual pneumatic control
Parking brake actuation	Mechanical

AXLES	
Model	LiuGong (Dry type)
Differential front type	Conventional
Differential rear type	Conventional
Axle oscillation	±11°

HYDRAULIC SYSTEM	
Description	
System supply: Two gear pumps with fix displacement. The steering function always has priority.	
Valves: Double-acting 2-spool valve. The main valve is controlled by a 2-spool pilot valve.	
Lift function: The valve has four positions: lift, hold, lower, and float. Inductive/magnetic automatic boom kick-out can be switched on and off and is adjustable to two positions: bucket at ground Level and maximum reach full lifting height.	
Tilt function: The valve has three functions: rollback, hold and dump.	
Cylinders: Double-acting cylinders for all functions.	
Filter: Full-flow filtration through 12 micron (absolute) filter cartridge.	
Main pump type	Gear
Main relief pressure	18 MPa
Raise	5.9 s
Dump time	1.5 s
Float down time	3.0 s
Fastest total cycle time	10.4 s
Controls	Joystick

SERVICE CAPACITY	
Fuel Tank	300 L
Engine Oil	22 L
Cooling System	42 L
Hydraulic System	160 L
Transmission and Torque Converter	45 L
Axles, Each	33 L

STEERING

Description

Steering system: Load-sensing hydraulic articulated steering.

System supply: The steering system has priority feed from a gear pump with fix displacement.

Steering cylinders: Two double-acting cylinders.

Steering configuration Articulated

Steering relief pressure 14 MPa

Steering cylinders 2

Cylinder bore 90 mm

Rod diameter 50 mm

Stroke 465 mm

Maximum flow 140 L/min

Maximum articulation $\pm 38^\circ$

Smallest turn (over tire) 6,103 mm

CAB

Description

Instrumentation: All important information is centrally located in the central instrument panel and operator's field of vision. Large curved front glass, rear mirrors ensure great visibility.

Adjustable steering column, high back seat, armrest box and A/C with all-around air outlets.

Pressurized cab with lower interior noise. The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449).

ELECTRICAL SYSTEM

Description

The central warning system is a conronic electrical system with central warning light and buzzer for the following functions:

Serious engine fault, low steering system pressure, interruption in communication (computer failure)

A central warning light and buzzer when the gear is engaged is for the following functions: Low engine oil pressure, low transmission oil pressure, high transmission oil temperature, low brake pressure, engaged parking brake, brake charging failure, high hydraulic oil temperature

Voltage 24 V

Batteries 2 x 12 V

Battery capacity 2 x 120 Ah

Cold cranking capacity, approx 850 A

Reserve capacity 230 min

Alternator rating 1,960 W / 70 A

Starter motor output 4.8 kW

SOUND & ENVIRONMENT

Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995 83 dB(A)-- Travel mode

Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995 84 dB(A)-- Stationary work cycle mode

External sound level according to ISO 6395-2008 112 dB(A)-- Travel mode

External sound level according to ISO 6395-2008 113 dB(A)-- Stationary work cycle mode

Ventilation 9.2 m³

Heating capacity 5.8 kW (7.8 hp)

Air conditioning 6 kW (8 hp)

LOADER ARM PERFORMANCE WITH ATTACHMENT

Description

Tipping Load data is calculated with standard bucket at 3.0 m³ and operating weight at 16,700 kg.

Tipping load - straight according to ISO 14397-1:2007 12,000 kg

Tipping load - full turn according to ISO 14397-1:2007 10,600 kg

Bucket breakout force 165 kN

A Maximum hinge pin height 4,030 mm

B Dump clearance at full height discharge 2,972 mm

C Dump reach at full height discharge 1,146 mm

D Maximum digging depth, bucket level 92 mm

S₁ Bucket rollback at ground level 45°

S₂ Bucket rollback at carry 49°

S₃ Bucket rollback at maximum height 61°

S₄ Maximum dump angle at full height 48°

DIMENSIONS

E Ground clearance 472 mm

G Wheelbase 3,250 mm

H Cab height 3,450 mm

J Wheel tread 2,150 mm

K Width over tires 2,750 mm

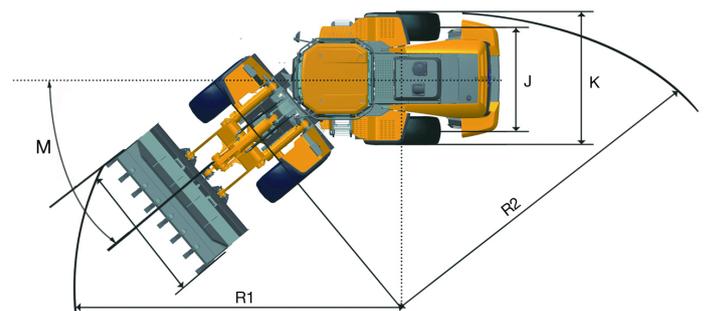
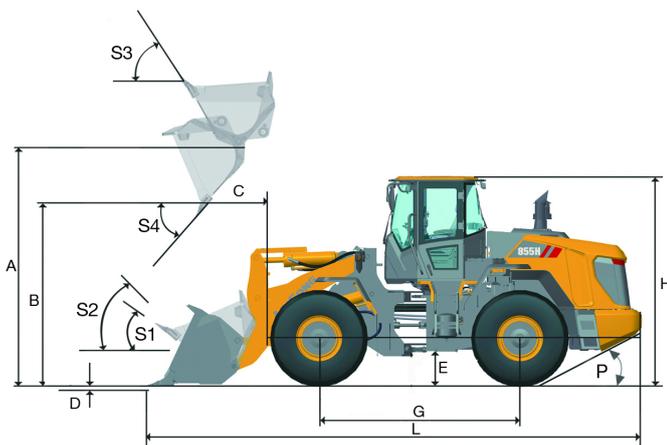
L Length with bucket down 8,202 mm

M Turn angle, either side 38°

P Rear angle of departure 27°

R₁ Turning radius, bucket carry 6,796 mm

R₂ Turning radius, outside of tire 6,103 mm



TIRES

Choosing the right tyres for your machine will become a key competitive advantage to achieve outstanding performance. Through close engineering and development cooperation with renowned and carefully selected suppliers, LiuGong can offer full range of tyres specially tailored for wheel loader.

Code	Application	Patterns	Size	PR / *	Tube Type	Width	Overall Diameter	Tread Depth	Load Capacity, 50 km/h / 10 km/h
L2	<ul style="list-style-type: none"> where good traction is needed, e.g. at grading work in soft and muddy operation where sharp stones don't occur in all load/carry operations 		23.5 - 25	12	TL	595 mm	1,615 mm	29.5 mm	3,650 / 6,150 kg
			23.5 - 25	16	TL	595 mm	1,615 mm	29.5 mm	6,150 / 9,500 kg
L3	<ul style="list-style-type: none"> in sand operation in all kind of load/carry operation the L3-tread is not as open as L2 and has consequently less self-cleansing compared with an L2 tyre 		23.5 - 25	16	TL	595 mm	1,615 mm	35 mm	6,150 / 9,500 kg
			23.5 - 25	20	TL	595 mm	1,615 mm	35 mm	7,300 / 10,900 kg
			23.5 - 25	24	TL	595 mm	1,615 mm	35 mm	8,000 / 13,200 kg
			23.5 R 25	*	TL	600 mm	1,617 mm	36 mm	7,100 / 12,150 kg
L5	<ul style="list-style-type: none"> in very aggressive material where good protection against cut damages is demanded, e.g. in quarries or mines 		23.5 R 25	*	TL	600 mm	1,704 mm	78 mm	12,150 kg, 10 km/h
			23.5 R 25	**	TL	600 mm	1,704 mm	78 mm	14,500 kg, 10 km/h

Note: The radial tire-load bearing capacity is indicated by the number of stars (*). More stars, greater radial tire-load bearing capacity. For the specific radial tire sizes listed in the table above, 2 stars (**) represents the maximum radial tire-load bearing capacity.

ATTACHMENTS

LiuGong attachments with pin-on or quick-coupler ensure high quality. The integrated design of the system creates a perfect match to achieve superior productivity.

Type	Capacity	Width	Height	Digging Depth	Dump Clearance	Dump Reach	Description	Attachment Drawing
General Purpose	2.6 m ³	2,972 mm	1,347 mm	35 mm	3,050 mm	1,030 mm	Anti-Wear Blade with Welded Teeth.	 General Purpose Forks
	3.0 m ³	2,972 mm	1,462 mm	35 mm	2,972 mm	1,146 mm	Anti-Wear Blade with Bolt-on Cutting Edge and Bolt-on Teeth.	
	3.5 m ³	2,972 mm	1,628 mm	67 mm	2,887 mm	1,230 mm	Bolt-on Cutting Edge; Bolt-on Teeth.	
Light Material	4.2 m ³	3,168 mm	1,425 mm	67 mm	2,792 mm	1,283 mm	Bolt-on Cutting Edge.	 Light Material Grass Grapple
	4.7 m ³	3,140 mm	1,552 mm	67 mm	2,695 mm	1,378 mm	Bolt-on Cutting Edge.	
	5.2 m ³	3,140 mm	1,534 mm	35 mm	2,659 mm	1,413 mm	Bolt-on Cutting Edge.	
Grapple	Φ1,000 mm	2,640 mm	1,732 mm	62 mm	2,610 mm	1,631 mm	Aligned Teeth.	 Grapple with Aligned Teeth Grapple with Crossed Teeth
	Φ350 mm	2,600 mm	1,520 mm	62 mm	2,848 mm	1,439 mm	Crossed Teeth.	

STANDARD EQUIPMENT

ENGINE

- Cummins 6LT9.3 Engine, EPA Tier 2 / EU Stage II Engine output net 149 kW (199 hp) intercooled, 6 cylinders, 4 stroke
- Mechanical direct fuel injection system
- Pre-filter with water separator
- Fuel filter
- Direct driven fan
- Grid heater

TRANSMISSION

- LiuGong BS306 planetary transmission
- Secondary oil filter, oil stick
- Remote pressure taps for diagnostics
- Interlock between parking brake and gear shifting

AXLE

- LiuGong dry axle without limited slip differentials
- Caliper discs brake
- Parking brake service as secondary

HYDRAULIC SYSTEM

- Two gear pumps with fix displacement hydraulic load-sensing
- Single joystick control
- Boom kick-out, automatic
- Bucket positioner, automatic
- Plug at the port of bucket and boom cylinder for pressure check
- Emergency boom lower via pilot accumulator

STEERING SYSTEM

- Load sensing system with flow amplification and steering priority

TIRE & RIM

- 23.5-25/L3 bias tire
- Normal fender

CHASSIS FRAME

- Spacious central articulation arrangement with conic bearing
- Articulation locking bar
- Tow hitch
- Rubber cushion articulation stops

LINKAGE & ATTACHMENTS

- Z-bar linkage

ELECTRIC SYSTEM

- Two front lights with high/low beam
- Two front headlights on top of cab
- Two rear headlight on top of cab
- Turn signals with flasher
- Batteries, free of maintenance
- Cigarette lighter, 24 V power outlet
- Electric horn
- Front and rear windshield wiper
- Electronic device compartment
- Back-up alarm
- Radio/player with USB port
- Reversing warning light, automatic

GAUGE GROUP

- Engine coolant temperature
- Transmission oil temperature
- Fuel level
- Hour meter
- Voltage
- Brake oil pressure

INDICATOR GROUP

- Intake air filter alert
- Battery charging
- Parking brake applied
- Machine emergent stop
- Power cut-off
- Engine servicing
- Turning lights
- Transmission oil pressure alarm
- Engine starter running
- Beam of front light

CAB

- Certified FOPS (ISO 3449) and ROPS (ISO 3471) cab
- Seat - mechanical suspension with 3 inch seat belt
- 2-way adjustable steering column
- Large curved front glass
- Rubber cab mounts
- Cab fresh air filter
- One interior & dual exterior rear-view mirrors
- Air Conditioner
- Lunch-box/cooler holder
- One beverage holder
- Cigar lighter

OTHERS

- Manual central lubrication

OPTIONAL EQUIPMENT

ENGINE

- Cold start aid
- Oil bath double air filter

HYDRAULIC SYSTEM

- Third valve and multipurpose lines

TIRE & RIM

- See tires options
- Tire protective chain

CAB

- Air suspension seat
- Heated external rear view mirrors
- Cab dust removal device
- Front windshield screen (must be mounted at factory)
- Rear-view camera display
- Sun visors
- Fire extinguisher
- Cab rear windshield defroster

LINKAGE & ATTACHMENTS

- Quick coupler
- Additional counterweight
- High/extra-linkage
- Bolt-on wear-resist blade and teeth
- Rock bucket
- Grapple with aligned or crossed teeth
- Fork
- Snow blade

OTHERS

- Weight scale (Electric load weigher)
- Hood protective guard
- License-plate bracket and light
- Rotating beacon
- Transmssion protective guard



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