

# SPECIFICATIONS

<b>Operating weight</b>	<b>10,300 kg</b>
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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.

<b>Bucket capacity</b>	<b>1.5 - 3.0 m³</b>
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## ENGINE

### Description

Weichai EPA Tier 2 / EU Stage II-approved, 6.75 liter, 6-cylinder straight turbocharged diesel engine with Common Rail fuel injection system Cummins turbocharged system, high transient response .

Air cleaning: Whirlwind pre filter, two stage air filter .

Cooling system: Air-to-air intercooler, direct driven fan and suction type cooling system, single radiator layout .

Emission rating	EPA Tier 2 / EU Stage II
Make	Weichai
Model	WP6G125E201 (305D transmission) WP6G125E221 (158 transmission)
Engine output - Gross (SAE J1995 / ISO 14396)	92 kW (123 hp) @ 2,000 rpm (305D transmission) 92 kW (123 hp) @ 2,200 rpm (158 transmission)
Engine output - Net (SAE J1349 / ISO 9249)	85 kW (114 hp) @ 2,000 rpm (305D transmission) 85 kW (114 hp) @ 2,200 rpm (158 transmission)
Peak torque	560 N·m
Displacement	6.75 L
Number of cylinders	6
Aspiration	Turbocharged & air-to-air intercooled

## TRANSMISSION(BS305D TRANSMISSION)

### Description

Torque converter: double-stage, four elements.  
Transmission: Liugong BS305D planetary transmission,  
Gearshifting system: Number of speeds, forward-2, revers-1. compact, high efficiency, low noise, easy to operation.

Transmission type	Planetary, power shift
Torque converter	Double stage, four elements
Maximum travel speed, fwd	37 km/h
Maximum travel speed, rev	15.5 km/h
Number of speed, fwd	2
Number of speed, rev	1

## TRANSMISSION(ZF 4WG 158 TRANSMISSION)

### Description

Torque converter: single-stage, three elements.  
Transmission: ZF 4WG 158 countershaft transmission, integrated pilot single joystick with FNR, KD and horn. Continuous power in gears shift and less compact.  
Gearshifting system: ZF Automatic Power Shift with auto modes (1~4/2~4) all start in gear 2, faster and better for long distance material transport.

Transmission type	Countershaft, power shift
Torque converter	Single stage, three elements
Maximum travel speed, fwd	36 km/h
Maximum travel speed, rev	23.5 km/h
Number of speed, fwd	4
Number of speed, rev	3

## SERVICE CAPACITY

Fuel Tank	140 L
Engine Oil	18 L
Cooling System	35 L
Hydraulic System	88 L
Transmission and Torque Converter	45 L (305D transmission)
Transmission and Torque Converter	40 L (200 transmission)
Axles, Each	41 L

## HYDRAULIC SYSTEM(BS305D TRANSMISSION)

### 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	4.7 s
Dump time	1.0 s
Float down time	3.1 s
Fastest total cycle time	8.8 s
Controls	Flexible shaft

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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	5.0 s
Dump time	1.1 s
Float down time	3.1 s
Fastest total cycle time	9.2 s
Controls	Joystick

## 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 17.2 MPa

Steering cylinders 2

Cylinder bore 80 mm

Rod diameter 45 mm

Stroke 420 mm

Maximum flow 210 L/min

Maximum articulation  $\pm 40^\circ$

Smallest turn (over tire) 5,090 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).

## AXLES

Model Liugong (Dry type)

Differential front type Conventional

Differential rear type Conventional

Axle oscillation  $\pm 11^\circ$

## ELECTRICAL SYSTEM

### Description

The central warning system is a contrinsic 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 1,960/70 W/A

Starter motor output 4.8 kW

## SOUND & ENVIRONMENT

Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995 82 dB(A)--Travel mode

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

External sound level according to ISO 6395-2008 107 dB(A)--Travel mode

External sound level according to ISO 6395-2008 108 dB(A)--Stationary work cycle mode

Ventilation 9.2 m<sup>3</sup> (12 yd<sup>3</sup>)

Heating capacity 5.8 kW (7.8 hp)

Air conditioning 6 kW (8 hp)

## LOADER ARM PERFORMANCE WITH ATTACHMENT

Tipping load - straight 7,800 kg

Tipping load - full turn 6,700 kg

Bucket breakout force 105 kN

A Maximum hinge pin height 3,730 mm

B Dump clearance at full height discharge 2,920 mm

C Dump reach at full height discharge 1,014 mm

D Maximum digging depth, bucket level 40 mm

S<sub>1</sub> Bucket rollback at ground level 41°

S<sub>2</sub> Bucket rollback at carry 48°

S<sub>3</sub> Bucket rollback at maximum height 61°

S<sub>4</sub> Maximum dump angle at full height 45°

## DIMENSIONS

E Ground clearance 345 mm

G Wheelbase 2,870 mm

H Cab height 3,232 mm

J Wheel tread 1,850 mm

K Width over tires 2,300 mm

L Length with bucket down 7,010 mm

M Turn angle, either side 40°

P Rear angle of departure 29°

R<sub>1</sub> Turning radius, bucket carry 5,600 mm

R<sub>2</sub> Turning radius, outside of tire 5,090 mm

## BRAKES

### Description

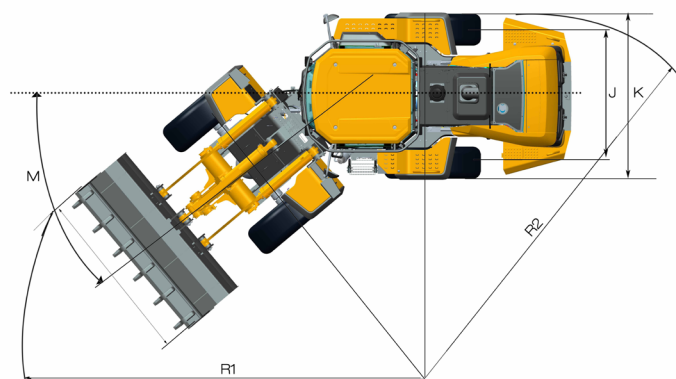
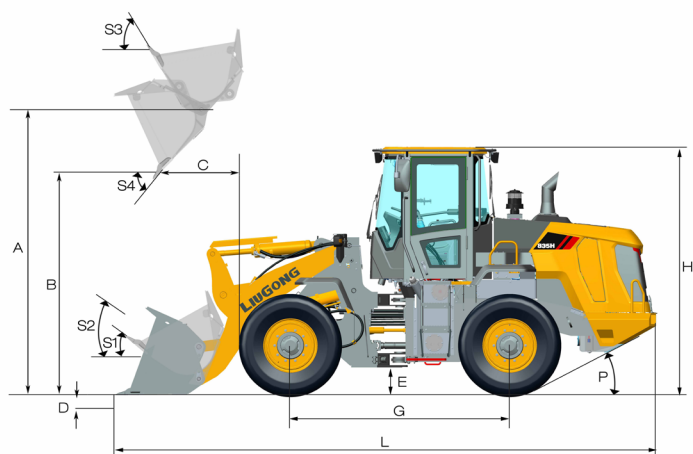
Two independent brake circuits, accurate control with the main valve & gear pump.

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



## TIRES

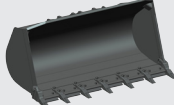
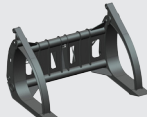
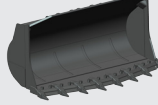
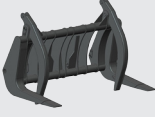
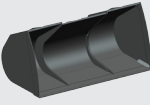
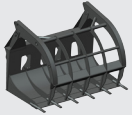


Choosing the right tyres for your machine will become a key competitive advantage to achieve outstanding performance. Through close engineering and development cooperation with renowned and carefully selected suppliers, Liugong can offer full range of tyres specially tailored for wheel loader.

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"> <li>where good traction is needed, e.g. at grading work</li> <li>in soft and muddy operation where sharp stones don't occur</li> <li>in all load/carry operations</li> </ul>		17.5 - 25	12	TL	445 mm	1,350 mm	25 mm	3,650 / 6,150 kg
			17.5 - 25	16	TL	445 mm	1,350 mm	25 mm	4,250 / 7,300 kg
L3	<ul style="list-style-type: none"> <li>in sand operation</li> <li>in all kind of load/carry operation</li> <li>the L3-tread is not as open as L2 and has consequently less self-cleansing compared with an L2 tyre</li> </ul>		17.5 - 25	14	TL	445 mm	1,350 mm	26 mm	3,930 / 6,700 kg
			17.5 - 25	16	TL	445 mm	1,350 mm	26 mm	4,250 / 7,300 kg
			17.5 - 25	20	TL	445 mm	1,350 mm	26 mm	5,000 / 8,250 kg
			17.5 R 25	*	TL	445 mm	1,345 mm	29 mm	7,100 / 4,125 kg
			17.5 R 25	**	TL	445 mm	1,345 mm	29 mm	8,500 / 5,450 kg
L5	<ul style="list-style-type: none"> <li>in very aggressive material where good protection against cut damages is demanded, e.g. in quarries or mines</li> </ul>		17.5 R 25	*	TL	445 mm	1,415 mm	64 mm	7,100 kg @ 10 km/h
			17.5 R 25	**	TL	445 mm	1,415 mm	64 mm	8,500 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		
General Purpose	1.8 m³	2,460 mm	1,158 mm	40 mm	2,920 mm	1,015 mm	Anti-Wear Blade with Welded Teeth.		
	2.0 m³	2,456 mm	1,195 mm	40 mm	2,850 mm	1,089 mm	Anti-Wear Blade with Bolt-on Cutting Edge and Bolt-on Teeth.		
	2.2 m³	2,537 mm	1,219 mm	40 mm	2,850 mm	1,089 mm	Bolt-on Cutting Edge; Bolt-on Teeth; Bolt-on Cutting Edge and Bolt-on Teeth.		
Light Material	2.5 m³	2,716 mm	1,204 mm	46 mm	2,780 mm	1,074 mm	Bolt-on Cutting Edge.		
	3.0 m³	2,766 mm	1,264 mm	56 mm	2,730 mm	1,189 mm	Bolt-on Cutting Edge.		
Rock	1.5 m³	2,526 mm	1,134 mm	78 mm	2,865 mm	980 mm	V-Shape Anti-Wear Blade.		
Grapple	Φ600 mm	2,030 mm	1,223 mm	46 mm	2,778 mm	1,216 mm	Aligned Teeth.		
	Φ400 mm	1,527 mm	1,600 mm	46 mm	2,575 mm	980 mm	Crossed Teeth.		

# STANDARD EQUIPMENT

## ENGINE

- Weichai WP6G125E201/WP6G125E221 Engine, EPA Tier 2 / EU Stage II Engine output net 85 kW (114 hp) air-to-air intercooled, 6 cylinders, 4 stroke
- Mechanical high pressure common rail
- Pre-filter with water separator
- Fuel filter
- Direct driven fan
- Flame Cold Start

## TRANSMISSION(LIUGONG BS305)

- Liugong BS305 planetary transmission
- Cable manual control, power shift

## TRANSMISSION(ZF4WG158)

- ZF 4WG158 semi-automatic power shift transmission
- Kick-down function, FNR, F4/R3
- Transmission oil level sight gauge
- Secondary oil filter, oil stick
- Remote pressure taps for diagnostics
- Auto shifting mode by speed
- Interlock between parking brake and gear shifting

## AXLE

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

## HYDRAULIC SYSTEM(LIUGONG BS305)

- Two gear pumps with fix displacement hydraulic load-sensing
- Flexible shaft control
- Plug at the port of bucket and boom cylinder for pressure check
- Emergency boom lower via pilot accumulator

## HYDRAULIC SYSTEM(ZF 4WG158)

- 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

- 17.5-25/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 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

- 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
- Cigarette lighter

## OTHERS

- Manual central lubrication

# OPTIONAL EQUIPMENT

## ENGINE

- Cold start aid
- Oil bath double air filter

## HYDRAULIC SYSTEM(LIUGONG BS305)

- Third valve and multipurpose lines
- Pilot joystick

## HYDRAULIC SYSTEM(ZF 4WG158)

- Third valve and multipurpose lines

## TIRE & RIM

- See tires options
- Full fender
- Tire protective chain

## CAB

- Certified FOPS (ISO 3449) and ROPS (ISO 3471)

## cab

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

## LINKAGE & ATTACHMENTS

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

- Snow blade

## OTHERS

- Automatic central lubrication
- Weight scale (Electric load weigher)
- Hood protective guard
- License-plate bracket and light
- Rotating beacon
- Transmission protective guard



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