

## SPECIFICATIONS

<b>Operating weight</b>	<b>12,700 kg</b>
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>1.8 - 4.0 m<sup>3</sup></b>

ENGINE	
Description	
Weichai EPA Tier 2 / EU Stage II-approved, 6.75 liter, 6-cylinder straight turbocharged diesel engine with mechanical direct fuel injection system.	
Weichai turbocharged system, high transient response.	
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	Weichai
Model	WP6G175E201
Engine output - Gross (SAE J1995 / ISO 14396)	129 kW (175 hp) @ 2,000 rpm
Engine output - Net (SAE J1349 / ISO 9249)	119 kW (162 hp) @ 2,000 rpm
Peak torque	810 N·m
Displacement	6.75 L
Number of cylinders	6
Aspiration	Turbocharged & air to air intercooled

SERVICE CAPACITY	
Fuel Tank	190 L
Engine Oil	18 L
Cooling System	40 L
Hydraulic System	115 L
Transmission and Torque Converter	45 / 40 L (LiuGong / ZF transmission)
Axles, Each	22 L

TRANSMISSION (LIUGONG BS305)	
Description	
Torque converter: double-stage, four elements.	
Transmission: Liugong BS305D planetary transmission,	
Gear shifting system: Number of speeds, forward-2, reverse-1. Compact, high efficiency, low noise, easy to operation.	
Transmission type	Planetary, power shift
Torque converter	Double stage, four elements
Max. travel speed, fwd	43 km/h
Max. travel speed, rev	19.4 km/h
Number of speed, fwd	2
Number of speed, rev	1

TRANSMISSION (ZF 4WG 200)	
Description	
Torque converter: single-stage, three elements.	
Transmission: ZF 4WG 200 countershaft transmission, integrated pilot single joystick with FNR, KD and horn. Continuous power in gears shift and less compact.	
Gear shifting 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
Max. travel speed, fwd	41 km/h
Max. travel speed, rev	25.4 km/h
Number of speed, fwd	4
Number of speed, rev	3

AXLES	
Model	Liugong (Dry type)
Differential front type	Conventional
Differential rear type	Conventional
Axle oscillation	±10.5°

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	19 MPa
Raise	5.6 s
Dump time	1.0 s
Float down time	3.0 s
Fastest total cycle time	9.6 s
Controls	Flexible shaft / Joystick

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	Flexible shaft control
Parking brake actuation	Mechanical

## 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 120 / 150 L/min  
(LiuGong / ZF transmission)

Maximum articulation  $\pm 40^\circ$

Smallest turn (over tire) 5,393 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 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>

Heating capacity 5.8 kW

Air conditioning 6 kW

## LOADER ARM PERFORMANCE WITH ATTACHMENT

### Description

Tipping Load data is calculated with standard bucket at 2.3 m<sup>3</sup> and operating weight at 12,700 kg.

Tipping load - straight according to ISO 14397-1:2007 9,600/9,400 kg  
(LiuGong / ZF transmission)

Tipping load - full turn according to ISO 14397-1:2007 8,400/8,200 kg  
(LiuGong / ZF transmission)

Bucket breakout force 124 kN

A Maximum hinge pin height 3,804 mm

B Dump clearance at full height discharge 2,880 mm

C Dump reach at full height discharge 1,108 mm

D Maximum digging depth, bucket level 45 mm

S<sub>1</sub> Bucket rollback at ground level 42°

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 384 mm

G Wheelbase 3,000 mm

H Cab height 3,300 mm

J Wheel tread 1,950 mm

K Width over tires 2,480 mm

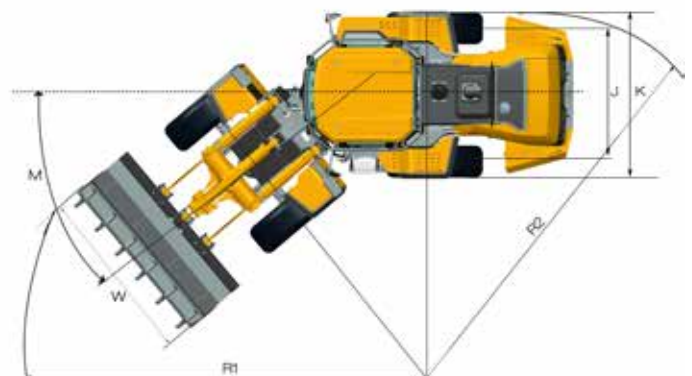
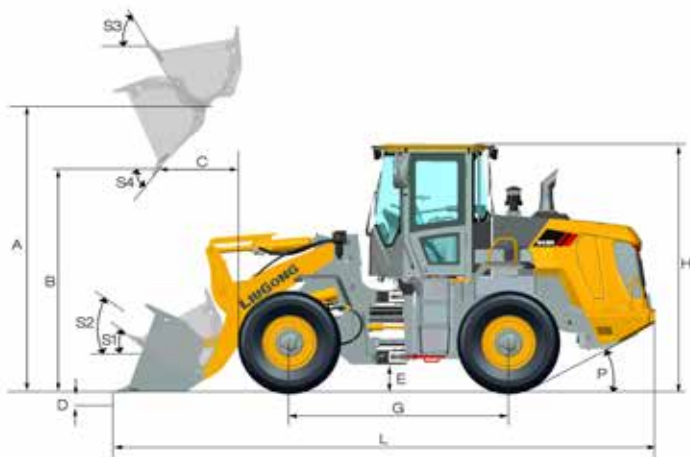
L Length with bucket down 7,572 mm

M Turn angle, either side 40°

P Rear angle of departure 28°





R<sub>1</sub> Turning radius, bucket carry 5,951 mm

R<sub>2</sub> Turning radius, outside of tire 5,393 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"> <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>		20.5 - 25	12	TL	520 mm	1,490 mm	30 mm	4,500 / 6,700 kg
			20.5 - 25	16	TL	520 mm	1,490 mm	30 mm	5,450 / 8,250 kg
			20.5 - 25	16	TL	520 mm	1,490 mm	30 mm	5,450 / 8,250 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>		20.5 - 25	20	TL	520 mm	1,490 mm	30 mm	6,000 / 9,000 kg
			20.5 - 25	24	TL	520 mm	1,490 mm	30 mm	6,700 / 10,300 kg
			20.5 R 25	*	TL	520 mm	1,492 mm	32 mm	7,300 / 9,500 kg
			20.5 R 25	**	TL	520 mm	1,492 mm	35 mm	7,300 / 1,150 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>		20.5 R 25	*	TL	520 mm	1,530 mm	72 mm	9,500 kg, 10 km/h
			20.5 R 25	**	TL	520 mm	1,530 mm	72 mm	11,500 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	2.3 m <sup>3</sup>	2,690 mm	1,252 mm	67 mm	2,880 mm	1,108 mm	Anti-Wear Blade with Welded Teeth.	
	2.5 m <sup>3</sup>	2,750 mm	1,482 mm	52 mm	2,827 mm	1,171 mm	Anti-Wear Blade with Bolt-on Cutting Edge and Bolt-on Teeth.	
	2.7 m <sup>3</sup>	2,750 mm	1,292 mm	70 mm	2,827 mm	1,161 mm	Bolt-on Cutting Edge; Bolt-on Teeth; Bolt-on Cutting Edge and Bolt-on Teeth.	
Light Material	2.7 m <sup>3</sup>	2,750 mm	1,292 mm	70 mm	2,827 mm	1,161 mm	Bolt-on Cutting Edge.	
	3.0 m <sup>3</sup>	2,870 mm	1,390 mm	82 mm	2,761 mm	1,209 mm	Bolt-on Cutting Edge.	
Rock	1.8 m <sup>3</sup>	2,596 mm	1,123 mm	39 mm	2,780 mm	1,150 mm	V-Shape Anti-Wear Blade.	
Grapple	Φ850 mm	2,255 mm	1,505 mm	12 mm	2,523 mm	1,570 mm	Aligned Teeth.	
	Φ320 mm	2,170 mm	1,545 mm	12 mm	2,435 mm	1,790 mm	Crossed Teeth.	

# STANDARD EQUIPMENT

## ENGINE

- Weichai WP6G175E201 Engine, EPA Tier 2 / EU Stage II engine output net 119 kW (162 hp) air-to-air intercooled, 6 cylinders, 4 stroke
- Mechanical direct fuel injection system
- 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 (ZF4WG 200)

- ZF 4WG200 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 4WG200)

- 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

- 20.5 R 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 4WG200)

- 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 window 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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