

## SPECIFICATIONS

|  |   |
|--|---|
| <b>Operating weight</b>  | <b>10,860 kg (23,942 lb)</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 (165 lb). |   |
| <b>Bucket capacity</b>   | <b>1.5 - 3 m<sup>3</sup> (2 - 3.9 yd<sup>3</sup>)</b> |

### ENGINE

|   |                                       |
|---|---------------------------------------|
| <b>Description</b>  |                                       |
| Engine: Perkins EPA Tier 4 final / EU Stage IV, 4.4 liter (1.2 gal), 4-cylinder straight turbocharged diesel engine with Common Rail fuel injection system. |                                       |
| Single stage turbocharger with Smart Wastegate.   |                                       |
| Diesel Oxidation Catalyst (DOC) + Selective Catalyst Reduction (SCR) back pressure valve for SCR system thermal management.                                 |                                       |
| Particulate emissions are reduced during combustion.  |                                       |
| Air cleaning: Direct flow air filter.   |                                       |
| Cooling system: Air-to-air intercooler, hydraulic motor drive and temperature controlled fan.   |                                       |
| Emission rating   | EPA Tier 4 final / EU Stage IV        |
| Make  | Perkins                               |
| Model   | 1204F-E44TAN                          |
| Engine Output - Max Gross (SAE J1995 / ISO 14396)   | 98 kW (131 hp) @ 2,200 rpm            |
| Engine Output - Max Net (SAE J1349 / ISO 9249)  | 93 kW (125 hp) @ 2,200 rpm            |
| Peak torque   | 530 N.m (390.9 lbf-ft)                |
| Displacement  | 4.4 L (1.2 gal)                       |
| Number of cylinders   | 4                                     |
| Aspiration  | Turbocharged & air-to-air intercooled |

### TRANSMISSION

|   |                              |
|---|------------------------------|
| <b>Description</b>  |                              |
| Torque converter: single-stage, three elements.   |                              |
| Transmission: ZF 4WG 158 countershaft transmission, integrated pilot single joystick with FNR, KD & horn.   |                              |
| 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 |
| Maximum travel speed, fwd   | 38.6 km/h (24 mph)           |
| Maximum travel speed, rev   | 25.1 km/h (15.6 mph)         |
| Number of speed, fwd  | 4                            |
| Number of speed, rev  | 3                            |

### HYDRAULIC SYSTEM

|  |                    |
|--|--------------------|
| <b>Description</b>   |                    |
| System supply: Single load-sensing axial piston pumps with variable displacement. The steering function always has priority.   |                    |
| Valves: Double-acting 3-spool valve. The main valve is controlled by a 3-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   | Piston             |
| Main relief pressure   | 19 MPa (2,756 psi) |
| Raise  | 5.5 s              |
| Dump time  | 1.1 s              |
| Float down time  | 3 s                |
| Fastest total cycle time   | 9.6 s              |
| Controls   | Joystick           |

### AXLES

|                         |                    |
|-------------------------|--------------------|
| Model                   | LiuGong (Wet type) |
| Differential front type | Limited slip       |
| Differential rear type  | Conventional       |
| Axle oscillation        | ±12°               |

### STEERING

|  |                          |
|--|--------------------------|
| <b>Description</b>   |                          |
| Steering system: Load-sensing hydraulic articulated steering.  |                          |
| System supply: The steering system has priority feed from a load-sensing axial piston pump with variable displacement. |                          |
| Steering cylinders: Two double-acting cylinders.   |                          |
| Steering configuration   | Articulated              |
| Steering relief pressure   | 18 Mpa (2,611 psi)       |
| Steering cylinders   | 2                        |
| Cylinder bore  | 80 mm (3.2")             |
| Rod diameter   | 45 mm (2")               |
| Stroke   | 420 mm (1' 4")           |
| Maximum flow   | 210 L/min (55.5 gal/min) |
| Maximum articulation   | ±40°                     |
| Smallest turn (over tire)  | 5,410 mm (17' 9")        |

### BRAKES

|  |                           |
|--|---------------------------|
| <b>Description</b>   |                           |
| Two independent brake circuits, disks out of rim, accurate control with the advanced main valve & piston pump. |                           |
| Service brake type   | Wet discs brake           |
| Service brake actuation  | Hydraulic                 |
| Parking brake type   | Manual electronic control |
| Parking brake actuation  | Hydraulic                 |

## ELECTRICAL SYSTEM

### Description

Central warning system is a centralized electrical system with central warning light and buzzer for following functions: Serious engine fault, Low steering system pressure, Interruption in communication (computer failure), Low engine oil pressure, High engine oil temperature, High charge-air temperature, Low coolant level, High coolant temperature, 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 (6.4 Hp) |

### SERVICE REFILL CAPACITIES

|                                   |                  |
|-----------------------------------|------------------|
| Fuel tank                         | 190 L (50.2 gal) |
| Engine oil                        | 12 L (3.2 gal)   |
| Cooling system                    | 28 L (7.4 gal)   |
| Hydraulic system                  | 110 L (29.1 gal) |
| Transmission and torque converter | 40 L (10.6 gal)  |
| Axles, each                       | 34 L (9 gal)     |
| DEF tank                          | 19 L (5.0 gal)   |

## SOUND & ENVIRONMENT

|  |   |
|--|---|
| Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995 | 72 dB(A)--<br>Travel mode                 |
| Sound level in cab according to ISO 6396-2008/EN ISO 3744-1995 | 73 dB(A)--<br>Stationary work cycle mode  |
| External sound level according to ISO 6395-2008                | 102 dB(A)--<br>Travel mode                |
| External sound level according to ISO 6395-2008                | 103 dB(A)--<br>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)                               |

## 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 view camera and mirrors ensure great visibility.

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

Pressurized cab with lower interior noise.

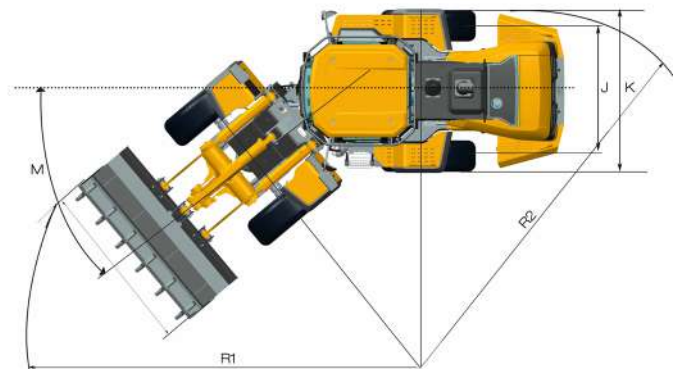
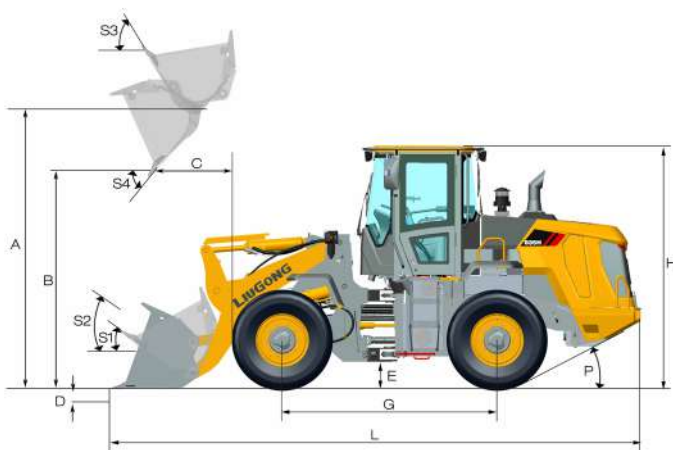
The cab is tested and approved according to ROPS (ISO 3471), FOPS (ISO 3449).

## LOADER ARM PERFORMANCE WITH ATTACHMENT

|   |                          |
|---|--------------------------|
| Tipping load – straight                   | 9,452 kg<br>(20,882 lb)  |
| Tipping load – full turn                  | 7,369 kg<br>(16,246 lb)  |
| Bucket breakout force                     | 100 kN<br>(22481 lbf-ft) |
| A Maximum hinge pin height                | 3,720 mm<br>(12' 3")     |
| B Dump clearance at full height discharge | 2,800 mm (9' 2")         |
| C Dump reach at full height discharge     | 1,076 mm (3' 6")         |
| D Maximum digging depth, bucket level     | 80 mm (3 in)             |
| S1 Bucket rollback at ground level        | 45°                      |
| S2 Bucket rollback at carry               | 48°                      |
| S3 Bucket rollback at maximum height      | 60°                      |
| S4 Maximum dump angle at full height      | 45°                      |





## DIMENSIONS

|  |                      |
|--|----------------------|
| E Ground clearance                             | 325 mm<br>(1' 1")    |
| G Wheelbase                                    | 2,870 mm<br>(9' 5")  |
| H Cab height                                   | 3,200 mm<br>(10' 6") |
| J Wheel tread                                  | 1,855 mm<br>(6' 1")  |
| K Width over tires                             | 2,300 mm<br>(7' 7")  |
| L Length with bucket down                      | 7,115 mm<br>(23' 4") |
| M Turn angle, either side                      | 40°                  |
| P Rear angle of departure                      | 28°                  |
| R <sub>1</sub> Turning radius, bucket carry    | 5,920 mm<br>(19' 5") |
| R <sub>2</sub> Turning radius, outside of tire | 5,410 mm<br>(17' 9") |



## TIRES





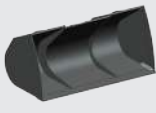



Choosing the right tires for your machine will become a key competitive advantage to achieve outstanding performance. Through close engineering and development cooperation with renowned and carefully selected suppliers, LiuGong can offer a full range of tires specially tailored for wheel loaders.

| Code | Application  | Patterns  | Size      | PR / * | Tube Type | Width, mm (ft/in) | Overall Diameter, mm (ft/in) | Tread Depth, mm (ft/in) | Load Capacity, 50 km/h / 10 km/h, kg | Load Capacity, 31.1 mph / 6.2 mph, lb |
|------|--|---|-----------|--------|-----------|-------------------|------------------------------|-------------------------|--------------------------------------|---------------------------------------|
| 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 with no sharp stones</li> <li>In all load/carry operations</li> </ul>                              |  | 17.5 - 25 | 12     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 25 mm (1")              | 3650/6150                            | 8047/13558                            |
|      |  |   | 17.5 - 25 | 16     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 25 mm (1")              | 4250/7300                            | 9370/16093                            |
| L3   | <ul style="list-style-type: none"> <li>In sand operation</li> <li>In all kinds of load/carry operations</li> <li>The L3 tread is not as broad as the L2, therefore there is less self-cleaning compared with an L2 tire</li> </ul> |  | 17.5 - 25 | 14     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 26 mm (1")              | 3930/6700                            | 8664/14771                            |
|      |  |   | 17.5 - 25 | 16     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 26 mm (1")              | 4250/7300                            | 9370/16093                            |
|      |  |   | 17.5 - 25 | 20     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 26 mm (1")              | 5000/8250                            | 11023/18188                           |
|      |  |  | 17.5 R 25 | *      | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 29 mm (1")              | 7100/4125                            | 15653/9094                            |
|      |  |   | 17.5 R 25 | **     | TL        | 445 mm (1' 6")    | 1,350 mm (4' 5")             | 29 mm (1")              | 8500/5450                            | 18739/12015                           |
| L5   | <ul style="list-style-type: none"> <li>In very aggressive material where sturdy protection against damage is demanded, e.g. in quarries or mines</li> </ul>  |  | 17.5 R 25 | *      | TL        | 445 mm (1' 6")    | 1,415 mm (4' 8")             | 64 mm (3")              | 7100, 10 km/h                        | 15653, 6.2 mph                        |
|      |  |   | 17.5 R 25 | **     | TL        | 445 mm (1' 6")    | 1,415 mm (4' 8")             | 64 mm (3")              | 8500, 10 km/h                        | 8739, 6.2 mph                         |

Note: The radial tire-load bearing capacity is indicated by the number of stars (\*). The more stars, the greater the 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 m³ (yd³) | Width mm (ft / in) | Height mm (ft / in) | Digging Depth mm (ft / in) | Dump Clearance mm (ft / in) | Dump Reach mm (ft / in) | Description  |   |   |
|-----------------|-------------------|--------------------|---------------------|----------------------------|-----------------------------|-------------------------|--|---|---|
| General Purpose | 1.5 m³ (2 yd³)    | 2,456 mm (8' 1")   | 1,100 mm (3' 7")    | 80 mm (3")                 | 2,780 mm (9' 1")            | 1,080 mm (3' 6")        | Anti-Wear Blade with Welded Teeth  | General Purpose   | Grapple with Aligned Teeth  |
|                 | 1.7 m³ (2.2 yd³)  | 2,465 mm (8' 1")   | 1,175 mm (3' 10")   | 80 mm (3")                 | 2,720 mm (8' 11")           | 1,120 mm (3' 8")        | Anti-Wear Blade with Bolt-on Cutting Edge and Bolt-on Teeth.                 |    |  |
|                 | 1.9 m³ (2.5 yd³)  | 2,640 mm (8' 8")   | 1,220 mm (4' 0")    | 80 mm (3")                 | 2,700 mm (8' 10")           | 1,150 mm (3' 9")        | Bolt-on Cutting Edge; Bolt-on Teeth; Bolt-on Cutting Edge and Bolt-on Teeth. |   |   |
|                 | 2.2 m³ (2.9 yd³)  | 2,537 mm (8' 4")   | 1,219 mm (4' 0")    | 80 mm (3")                 | 2,660 mm (8' 9")            | 1,180 mm (3' 10")       | Bolt-on Cutting Edge; Bolt-on Teeth.   |   |   |
| Light Material  | 2.3 m³ (3.0 yd³)  | 2,660 mm (8' 9")   | 1,070 mm (3' 6")    | 80 mm (3")                 | 2,660 mm (8' 9")            | 1,190 mm (3' 11")       | Bolt-on Cutting Edge.  |    |  |
|                 | 2.5 m³ (3.3 yd³)  | 2,716 mm (8' 11")  | 1,200 mm (3' 11")   | 80 mm (3")                 | 2,600 mm (8' 6")            | 1,220 mm (4' 0")        | Bolt-on Cutting Edge.  |   |   |
|                 | 3 m³ (3.9 yd³)    | 2,700 mm (8' 10")  | 1,280 mm (4' 2")    | 80 mm (3")                 | 2,560 mm (8' 5")            | 1,255 mm (4' 1")        | Bolt-on Cutting Edge; Bolt-on Cutting Edge and Welded Teeth.                 |   |   |
| Rock            | 1.5 m³ (2 yd³)    | 2,530 mm (8' 4")   | 1,130 mm (3' 9")    | 80 mm (3")                 | 2,760 mm (9' 1")            | 1,060 mm (3' 6")        | V-Shape Anti-Wear Blade.   |    |  |
| Grapple         | Φ380 mm (1' 3")   | 2,120 mm (6' 12")  | 1,620 mm (5' 4")    | 128 mm (5")                | 2,570 mm (8' 5")            | 1,490 mm (4' 11")       | Aligned Teeth.   |   |   |
|                 | Φ125 mm (5")      | 2,300 mm (7' 7")   | 1,200 mm (3' 11")   | 50 mm (2")                 | 2,567 mm (8' 5")            | 1,418 mm (4' 8")        | Crossed Teeth.   |   |   |

# STANDARD EQUIPMENT

## ENGINE

- Perkins 1204F-E44TAN, Tier 4 final/StageIV, air-to-air intercooled, 4 cylinders, 4 stroke, reverse fan cooling.
- High Pressure Common Rail
- Exhaust emission control
- DC air filter, fuel filter
- Hydraulic driven reversible fan

## TRANSMISSION

- ZF 4WG158 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 wet front axle with limited slip differentials
- Wet discs service brake system
- Parking brake service as secondary

## HYDRAULIC SYSTEM

- Single piston pumps with variable displacement hydraulic load-sensing
- Third valve and multipurpose lines
- 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
- Emergency steering system

## TIRE & RIM

- 17.5-25/L3 Bias tire
- Full 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
- Four front headlights on top of cab
- Four 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
- Rotating beacon
- License-plate bracket and light

## GAUGE GROUP

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

## INDICATOR GROUP

- Air inlet heater
- Battery charging
- Parking brake applied
- Machine emergent stop
- Power cut-off
- Engine servicing
- Turning lights
- 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
- 4-way adjustable steering column
- Large curved front glass
- Rubber cab mounts
- Cab fresh air filter
- One interior & dual exterior rear-view mirrors
- Rear-view camera display
- Air conditioner
- Lunch-box/cooler holder
- One beverage holder
- Cigarette lighter
- Cab rear windshield defroster
- Sun visors
- Fire extinguisher

## OTHERS

- Manual central lubrication
- Wedge block

# OPTIONAL EQUIPMENT

## ENGINE

- Cold start aid

## AXLE

- LiuGong wet front axle without limited slip differentials

## HYDRAULIC SYSTEM

- Ride control

## TIRE & RIM

- See tires options
- Normal fender
- Tire protective chain

## CAB

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

## 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



## Guangxi LiuGong Machinery Co., Ltd.

No. 1 Liutai Road, Liuzhou, Guangxi 545007, PR China  
T: +86 772 388 6124 E: overseas@liugong.com  
www.liugong.com

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